ATTACHMENT 4. BUDGET – PROPOSAL ROLL-UP

Pages one through five summarize the Proposal budget.

Please note: Due to an extensive budget narrative for the Seaside Groundwater Basin ASR Project, it is presented after the Microbial Source Tracking Project.

Table 8 - Summary Budget

Proposal Title:MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1

	Individual Project Title	Non-State Share (Funding Match)	Requested Grant Funding (DWR Grant Amount)	Other State Funds Being Used	Total	% Funding Match
(a)	**Lower Carmel River Restoration and Floodplain Enhancement**	$3,659,000	$2,000,000	$9,643,000	$15,302,000	**24%**
(b)	**Carmel River Lagoon and Beach Studies**	$90,000	$210,500		$300,500	**30%**
(c)	**Seaside Groundwater Basin ASR**	$4,725,633	$1,702,000		$6,427,633	**74%**
(d)	**Sanitary Sewer System Repair**	$287,500	$712,500		$1,000,000	**29%**
(e)	**Implementation of Solid Waste Removal**	$210,000	$540,000		$750,000	**28%**
(f)	**Carmel River Watershed Volunteer Program**	$205,076	$485,511		$690,587	**30%**
(g)	**Microbial Source Tracking in the Cities of Monterey and Pacific Grove**	$67,000	$185,000		$252,000	**27%**
(h)	**MPWMD Grant Administration**	$0	$291,775		$291,775	**0%**
(i)	**Grand Total (Sum rows (a) through (h) for each column)**	**$9,244,209**	**$6,127,286**	**$9,643,000**	**$25,014,495**	**37%**

Table 7 - Project Budget

Proposal Title:MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1

	Budget Category	(a) Non-State Share* (Funding Match)	(b) Requested Grant Funding	(c) Other State Funds Being Used	(d) Total	(e) % Funding Match
	Direct Project Administration Costs					
(a)	Lower Carmel River Restoration and Floodplain Enhancement	$75,000	$15,000	$110,000	$200,000	**38%**
	Carmel River Lagoon and Beach Studies	$25,000			$25,000	**100%**
	Seaside Groundwater Basin ASR	$130,000			$130,000	**100%**
	Sanitary Sewer System Repair	$14,370	$35,625		$49,995	**29%**
	Implementation of Solid Waste Removal Technology	$10,500	$27,000		$37,500	**28%**
	Carmel River Watershed Volunteer Program	$1,500	$31,344		$32,844	**5%**
	Microbial Source Tracking in the Cities of Monterey and Pacific Grove	$3,350	$9,250		$12,600	**27%**
	Grant Admininstration Costs (5% of all project fund requests)		$291,775		$291,775	**0%**
Subtotal (a)	**Direct Project Administration Costs**	**$259,720**	**$409,994**	**$110,000**	**$779,714**	**33%**
	Land Purchase/Easement					
(b)	Lower Carmel River Restoration and Floodplain Enhancement	$1,500,000			$1,500,000	**100%**
	Carmel River Lagoon and Beach Studies	$50,000			$50,000	**100%**
	Seaside Groundwater Basin ASR				$0	**0%**
	Sanitary Sewer System Repair				$0	**0%**
	Implementation of Solid Waste Removal Technology				$0	**0%**
	Carmel River Watershed Volunteer Program				$0	**0%**
	Microbial Source Tracking in the Cities of Monterey and Pacific Grove				$0	**0%**
Subtotal (b)	**Land Purchase/Easement**	**$1,550,000**	**$0**	**$0**	**$1,550,000**	**100%**

Table 7 - Project Budget Proposal Title:MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1						
		(a)	(b)	(c)	(d)	(e)
Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
	Planning/Design/Engineering/ Environmental Documentation					
(c)	Lower Carmel River Restoration and Floodplain Enhancement	$20,000	$100,000	$1,100,000	$1,220,000	**2%**
	Carmel River Lagoon and Beach Studies	$10,000	$120,500		$130,500	**8%**
	Seaside Groundwater Basin ASR	$784,700			$784,700	**100%**
	Sanitary Sewer System Repair	$34,500	$85,500		$120,000	**29%**
	Implementation of Solid Waste Removal Technology	$25,200	$64,800		$90,000	**28%**
	Carmel River Watershed Volunteer Program	$6,900	$71,730		$78,630	**9%**
	Microbial Source Tracking in the Cities of Monterey and Pacific Grove	$3,350	$9,250		$12,600	**27%**
Subtotal (c)	**Planning/Design/Engineering/ Environmental Documentation**	**$884,650**	**$451,780**	**$1,100,000**	**$2,436,430**	**36%**
	Construction/Implementation					
(d)	Lower Carmel River Restoration and Floodplain Enhancement	$300,000	$1,785,000	$7,147,000	$9,232,000	**3%**
	Carmel River Lagoon and Beach Studies				$0	**0%**
	Seaside Groundwater Basin ASR	$2,739,661	$1,702,000		$4,441,661	**62%**
	Sanitary Sewer System Repair	$186,885	$463,125		$650,010	**29%**
	Implementation of Solid Waste Removal Technology	$115,500	$297,000		$412,500	**28%**
	Carmel River Watershed Volunteer Program	$196,676	$382,437		$579,113	**34%**
	Microbial Source Tracking in the Cities of Monterey and Pacific Grove	$52,930	$146,150		$199,080	**27%**
Subtotal (d)	**Construction/Implementation**	**$3,591,652**	**$4,775,712**	**$7,147,000**	**$15,514,364**	**23%**

Table 7 - Project Budget Proposal Title:MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1						
		(a)	(b)	(c)	(d)	(e)
	Budget Category	Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
	Environmental Compliance/ Mitigation/Enhancement					
(e)	Lower Carmel River Restoration and Floodplain Enhancement	$1,764,000	$100,000	$1,286,000	$3,150,000	**56%**
	Carmel River Lagoon and Beach Studies	$5,000	$30,000		$35,000	**14%**
	Seaside Groundwater Basin ASR				$0	**0%**
	Sanitary Sewer System Repair	$14,370	$35,625		$49,995	**29%**
	Implementation of Solid Waste Removal Technology	$10,500	$27,000		$37,500	**28%**
	Carmel River Watershed Volunteer Program				$0	**0%**
	Microbial Source Tracking in the Cities of Monterey and Pacific Grove	$3,350	$9,250		$12,600	**27%**
Subtotal (e)	**Environmental Compliance/ Mitigation/Enhancement**	**$1,797,220**	**$201,875**	**$1,286,000**	**$3,285,095**	**55%**
	Construction Administration					
(f)	Lower Carmel River Restoration and Floodplain Enhancement				$0	**0%**
	Carmel River Lagoon and Beach Studies				$0	**0%**
	Seaside Groundwater Basin ASR				$0	**0%**
	Sanitary Sewer System Repair				$0	**0%**
	Implementation of Solid Waste Removal Technology				$0	**0%**
	Carmel River Watershed Volunteer Program				$0	**0%**
	Microbial Source Tracking in the Cities of Monterey and Pacific Grove				$0	**0%**
Subtotal (f)	**Construction Administration**	**$0**	**$0**	**$0**	**$0**	**0%**

Table 7 - Project Budget

Proposal Title:MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1

	Budget Category	(a) Non-State Share* (Funding Match)	(b) Requested Grant Funding	(c) Other State Funds Being Used	(d) Total	(e) % Funding Match
	Other Costs					
(g)	Lower Carmel River Restoration and Floodplain Enhancement				$0	**0%**
	Carmel River Lagoon and Beach Studies		$60,000		$60,000	**0%**
	Seaside Groundwater Basin ASR				$0	**0%**
	Sanitary Sewer System Repair	$37,375	$92,625		$130,000	**29%**
	Implementation of Solid Waste Removal Technology	$27,300	$70,200		$97,500	**28%**
	Carmel River Watershed Volunteer Program				$0	**0%**
	Microbial Source Tracking in the Cities of Monterey and Pacific Grove	$4,020	$11,100		$15,120	**27%**
Subtotal (g)	**Other Costs**	**$68,695**	**$233,925**	**$0**	**$302,620**	**23%**
	Construction/Implementation Contingency					
(h)	Lower Carmel River Restoration and Floodplain Enhancement				$0	**0%**
	Carmel River Lagoon and Beach Studies				$0	**0%**
	Seaside Groundwater Basin ASR	$1,071,272			$1,071,272	**100%**
	Sanitary Sewer System Repair				$0	**0%**
	Implementation of Solid Waste Removal Technology	$21,000	$54,000		$75,000	**28%**
	Carmel River Watershed Volunteer Program				$0	**0%**
	Microbial Source Tracking in the Cities of Monterey and Pacific Grove				$0	**0%**
Subtotal (h)	**Construction/Implementation Contingency**	**$1,092,272**	**$54,000**	**$0**	**$1,146,272**	**95%**
(i)	**Grand Total (Sum rows (a) through (h) for each column)**	**$9,244,209**	**$6,127,286**	**$9,643,000**	**$25,014,495**	**37%**

ATTACHMENT 4. BUDGET – LOWER CARMEL RIVER FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT

Table 7 - Project Budget Proposal Title: Monterey Peninsula, Carmel Bay, and South Monterey Bay Integrated Regional Water Management Plan Project Title: Lower Carmel River Floodplain Restoration and Enhancement Project						
		(a)	(b)	(c)	(d)	(e)
Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	**Direct Project Administration Costs**					
	Project Manager	$75,000	$15,000	$110,000	$200,000	**38%**
(b)	**Land Purchase/Easement**					
	85 acres land donation	$1,500,000	$0	$0	$1,500,000	**100%**
(c)	**Planning/Design/Engineering/ Environmental Documentation**					
	Consultants (civil, bridge, flood, ecological)	$0	$100,000	$1,100,000	$1,200,000	**0%**
	Permit Costs	$20,000	$0	$0	$20,000	**100%**
(d)	**Construction/Implementation**					
	1. Flood Conveyance Structure (Causeway)	$300,000	$1,785,000	$7,147,000	$9,232,000	**3%**
	2. Floodplain Restoration & Revegetation	$1,764,000	$100,000	$1,286,000	$3,150,000	**56%**
(e)	Environmental Compliance/ Mitigation/Enhancement	-	-	-	-	**-**
(f)	Construction Administration	-	-	-	-	**-**
(g)	Other Costs	-	-	-	-	**-**
(h)	Construction/Implementation Contingency	-	-	-	-	**-**
(i)	**Grand Total (Sum rows (a) through (h) for each column)**	**$3,659,000**	**$2,000,000**	**$9,643,000**	**$15,302,000**	**24%**

Proposal Title: Monterey Peninsula, Carmel Bay, and South Monterey Bay Integrated Regional Water Management Plan
Project Title: Lower Carmel River Flooplain Restoration and Enhancement Project

PROJECT COSTS

BUDGET CATEGORY	Unit Price	Units	Quant.	Total Project	(a) Non-State Share (Funding Match) *	(b) Requested Grant Funding	(c) Other State Funds Being Used **	(d) Total	(e) % Matching Fund
Direct Project Administration Costs									
Project Manager	$ 68.75	Hourly	2,909	$200,000	$75,000	$15,000	$110,000	$200,000	38%
Land Purchase/Easement									
85 acres land donation				$1,500,000	$1,500,000	$0	$0	$1,500,000	100%
Planning/Design/Engineering/Env. Documentation									
Consultants (civil, bridge, flood, ecological)	$ 150.00	Hourly	8000	$1,200,000	$0	$100,000	$1,100,000	$1,200,000	0%
Permit Costs				$20,000	$20,000	$0	$0	$20,000	100%
Subtotal				$1,220,000	$20,000	$100,000	$1,100,000	$1,220,000	38%
Subtotal PM, Land, Design, Permitting Costs				**$2,920,000**	**$1,595,000**	**$115,000**	**$1,210,000**	**$2,920,000**	**55%**
Implementation/Construction									
1. Flood Conveyance Structure (Causeway)									
ITEM: Earthwork									
Roadway Excavation	$50	CY	11,400	$570,000					
Roadway Excavation (AC Removal)	$60	CY	550	$32,986					
Clearing & Grubbing	$10,000	acre	3	$30,000					
Place & Compact Embankment	$40	CY	4,000	$160,000					
Subtotal Earthwork				*$792,986*					
ITEM: Pavement Structural Section									
Asphalt Concrete	$120	Ton	1,370	$164,450					
Aggregate Base	$60	CY	1,701	$102,089					
Cold Plan Asphalt Concrete	$30	SY	364	$10,928					
Subtotal Pavement Structural Section				*$277,466*					
ITEM: Project Drainage									
Subtotal Drainage	*$19,000*	*LS*	*$19,000*	*$19,000*					
ITEM: Specialty Items									
Water Pollution Control	$25,000	LS	1	$25,000					
ESA Fencing	$10	LF	2500	$25,000					
Transition Railing	$4,000	EA	4	$16,000					
Terminal System	$3,000	EA	4	$12,000					
Rock Slope Protection	$150	CY	1,250	$187,500					
Temporary Bypass Road	$1,057,145	LS	$1,057,145	$1,057,145					
Subtotal Specialty Items				*$1,322,645*					
ITEM: Traffic Items									
Subtotal Traffic Items		LS		$75,000					
ITEM: Erosion Control									
Subtotal Erosion Control		LS		*$26,000*					
ITEM: Roadway Mobilization									
Subtotal Mobilization		*LS*		*$263,980*					
ITEM: Contingencies									
Subtotal Contingencies		*LS*		*$717,645*					
ITEM: Structure (Slab Bridge)									
Subtotal Slab Bridge		LS		*$4,236,563*					
ITEM: Utility Relocation									
Subtotal Relocation		*LS*		*$1,500,350*					
Subtotal Flood Conveyance Structure				***$9,231,635***	***$300,000***	***$1,785,000***	***$7,147,000***	***$9,232,000***	**3%**
2. Floodplain Restoration & Revegetation									
ITEM: Floodplain Grading									
Excavation	$ 3.00	CY	$400,000	$1,200,000					
Place and compact fill material	$ 4.00	CY	$400,000	$1,600,000					
Detailed feature grading	$ 2.50	SY	$60,000	$150,000					
Subtotal Floodplain Grading				*$2,950,000*					
ITEM: Erosion Control									
Hauling and stockpiling rock	$ 20.00	CY	2000	$40,000					
Placing rock	$ 80.00	CY	2000	$160,000					
Subtotal Erosion Control				*$200,000*					
Subtotal Floodplain Rest. & Reveg.				***$3,150,000***	***$1,764,000***	***$100,000***	***$1,286,000***	***$3,150,000***	**56%**
GRAND TOTAL:				**$15,301,635**	**$3,659,000**	**$2,000,000**	**$9,643,000**	**$15,302,000**	**24%**

*** Non State Funding Share Match - Sources**		
USEPA	$778,000	**Secured**
USFWS	$786,000	**Secured**
Land Donation Eastwood & BSLT	$1,500,000	
Local Agency - BSLT staff time	$95,000	
Local Agency - MCWRA staff time	$200,000	
Local Agency - CSA 50 capital contribution	$300,000	
	$3,659,000	
**** Other State Funding Sources**		
Caltrans - Secured	$1,000,000	**Secured**
State Coastal Conservancy - Secured	$2,500,000	**Secured**
Wildlife Conservation Board - Secured	$2,500,000	**Secured**
Urban Streams - requested	$1,000,000	
Prop 1E Stormwater - to be requested	$2,500,000	
Prop 1E Flood Corridor - to be requested	$3,000,000	
	$12,500,000	

ATTACHMENT 4. BUDGET – CARMEL RIVER LAGOON AND BEACH STUDIES

Table 7 - Project Budget

Proposal Title:MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1

Project Title:_____Carmel River Lagoon and Beach Studies_____

	Budget Category	(a) Non-State Share* (Funding Match)	(b) Requested Grant Funding	(c) Other State Funds Being Used	(d) Total	(e) % Funding Match
Phase I-V (Round 1 Implementation Grant Request)						
(a)	Direct Project Administration Costs	$25,000	$0	$0	$25,000	**100%**
(b)	Land Purchase/Easement	$50,000	$0	$0	$50,000	**100%**
(c)	Planning/Design/Engineering/ Environmental Documentation	$0	$0	$0	$0	**0%**
	Phase I-VI	$10,000	$120,500		$130,500	
(d)	Construction/Implementation	$0	$0	$0	$0	**0%**
(e)	Environmental Compliance/ Mitigation/Enhancement	$5,000	$30,000	$0	$35,000	**14%**
(f)	Construction Administration	$0	$0	$0	$0	**0%**
(g)	Other Costs - includes $20,000 for design contingency	$0	$60,000	$0	$60,000	**0%**
(h)	Construction/Implementation Contingency	$0	$0	$0	$0	**0%**
	Subtotal Phase I-VI	**$90,000**	**$210,500**	**$0**	**$300,500**	**30%**
Future Phase Estimate						
(c)	Planning/Design/Engineering/ Environmental Documentation					
	P & E for Construction/Implementation**	$285,000			$285,000	
(d)	Construction/Implementation**	$850,000			$850,000	
	Subtotal Future Phase	**$1,135,000**			**$1,135,000**	
(i)	**Grand Total (Sum rows (a) through (h) for each column)****	**$1,225,000**			**$1,435,500**	

***List sources of funding:** *Use as much space as required.*

(a) from Monterey County; (b) wetlands donation; (c), (e) CRWC funds (total of $15,000); (d) from future grant and local match funds

***A total of $1,135,000 in grant funds and local match will be required to complete future phase (c) and (d) and is not yet identified.*

ATTACHMENT 4. BUDGET – CITY OF MONTEREY – SEWER LINE REHABILITATION GRANT PROPOSAL

Table 7 - Project Budget					
Proposal Title: MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1 Project Title: City of Monterey & Pacific Grove – Sewerline Rehabilitation Grant Proposal					
	Budget Category	(a) Non-State Share* (Funding Match)	(b) Requested Grant Funding	(d) Total	(e) % Funding Match
(a)	Direct Project Administration Costs (5%)	$14,370	$35,625	$49,995	**29%**
(c)	Planning/Design/Engineering/Environmental Documentation (12%)	$34,500	$85,500	$120,000	**29%**
(d)	Construction/Implementation	$186,885	$463,125	$650,010	**29%**
(e)	Environmental Compliance/Mitigation/Enhancement (5%)	$14,370	$35,625	$49,995	**29%**
(g)	Other (Explain): (4% const mgmt, 3% survey, 6% unforeseen)	$37,375	$92,625	$130,000	**29%**
	Grand Total (Sum rows (a) through (g) for each column)	**$287,500**	**$712,500**	**$1,000,000**	**29%**
***List sources of funding:** *Source(s) of funds for Non-State Share (cost match) Cities sewer funds*					

ATTACHMENT 4. BUDGET – CITY OF MONTEREY – SOLID WASTE REMOVAL TECHNOLOGY (FROM STORM WATER)

Table 7 - Project Budget					
Proposal Title:MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1 Project Title: Solid Waste Removal Technology (from storm water)					
		(a)	(b)	(d)	(e)
Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Total	% Funding Match
(a)	Direct Project Administration Costs (5%)	$10,500	$27,000	$37,500	**28%**
(c)	Planning/Design/Engineering/ Environmental Documentation (12%)	$25,200	$64,800	$90,000	**28%**
(d)	Construction/Implementation	$115,500	$297,000	$412,500	**28%**
(e)	Environmental Compliance/ Mitigation/Enhancement (5%)	$10,500	$27,000	$37,500	**28%**
(g)	Other Costs:(4% const mgmt, 3% survey, 6% unforeseen)	$27,300	$70,200	$97,500	**28%**
(h)	Construction/Implementation Contingency (10%) rock	$21,000	$54,000	$75,000	**28%**
(i)	**Grand Total (Sum rows (a) through (h) for each column)**	**$210,000**	**$540,000**	**$750,000**	**28%**
***List sources of funding:** *City to budget out of the storm water program CIP*					

ATTACHMENT 4. BUDGET – CARMEL RIVER WATERSHED VOLUNTEER PROGRAM

Table 7 - Project Budget Proposal Title: Monterey County Prop 84 IRWMP Grant Proposal Project Title: Carmel River Watershed Volunteer Program						
	Budget Category	(a) Non-State Share* (Funding Match)	(b) Requested Grant Funding	(c) Other State Funds Being Used	(d) Total	(e) % Funding Match
(a)	Direct Project Administration Costs	$1,500	$31,344		$32,844	**5%**
(b)	Land Purchase/Easement				$0	**0%**
(c)	Planning/Design/Engineering/ Environmental Documentation	$6,900	$71,730		$78,630	**250%**
(d)	Construction/Implementation	$196,676	$382,437		$579,113	**0%**
(e)	Environmental Compliance/ Mitigation/Enhancement				$0	**0%**
(f)	Construction Administration				$0	**0%**
(g)	Other Costs				$0	**0%**
(h)	Construction/Implementation Contingency				$0	**0%**
(i)	**Grand Total (Sum rows (a) through (h) for each column)**	**$205,076**	**$485,511**	**$0**	**$690,587**	**30%**
***List sources of funding: Non-state funding includes in-kind contributions from community members who will be trained in water quality, habitat and river flow monitoring protocols: valued at $25/hour. Other sources of funds include donated equipment, supplies and discounted rates on contracted services such as evaluation consultants and laboratory services.**						

ATTACHMENT 4. BUDGET – MICROBIAL SOURCE TRACKING

Table 7 - Project Budget

Proposal Title:_____

Project Title:Microbial Source Tracking in the Cities of Monterey and Pacific Grove

	Budget Category	(a) Non-State Share* (Funding Match)	(b) Requested Grant Funding	(d) Total	(e) % Funding Match
(a)	Direct Project Administration Costs (5%)	$3,350	$9,250	$12,600	**27%**
(c)	Planning/Environmental Documentation (5%)	$3,350	$9,250	$12,600	**27%**
(d)	Construction/Implementation	$52,930	$146,150	$199,080	**27%**
(e)	Environmental Compliance/ Mitigation/Enhancement (5%)	$3,350	$9,250	$12,600	**27%**
(g)	Other Costs: (6% unforeseen)	$4,020	$11,100	$15,120	**27%**
(i)	**Grand Total (Sum rows (a) through (h) for each column)**	**$67,000**	**$185,000**	**$252,000**	**27%**

***List sources of funding:** *Use the Cities of Monterey and Pacific Grove storm drain accounts.*

ATTACHMENT 4. BUDGET – SEASIDE GROUNDWATER BASIN AQUIFER STORAGE AND RECOVERY PROJECT

Table 7 - Project Budget Proposal Title:MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1 Project Title: Seaside Groundwater Basin Aquifer Storage and Recovery Project						
		(a)	(b)	(c)	(d)	(e)
Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	**Direct Project Administration Costs**					
	MPWMD Staff	$130,000			$130,000	**100%**
(b)	**Land Purchase/Easement**					
	MPUSD Easement (Phase 2 Site)	NA				
(c)	**Planning/Design/Engineering/ Environmental Doc.**					
	Professional Services Support (Pueblo Water Resources)	$734,700			$734,700	**100%**
	Addendum to ASR Phase 1 EIR Document	$50,000			$50,000	**100%**
(d)	**Construction/Implementation**					
	Phase 1 - Santa Margarita Site					
	ASR Facility Building (in construction)	$469,000			$469,000	**100%**
	Motor Switchboard equipment (ordered)	$54,500			$54,500	**100%**
	Motor Control Center equipment (ordered)	$7,300			$7,300	**100%**
	Motor Variable Frequency Drive (VFD) equipment (ordered)	$100,465			$100,465	**100%**
	Shielded Power Cables for VFD Equipment (in design)	$56,000			$56,000	**100%**
	Phase 2 - Seaside Middle School Site					
	ASR test well (SMS-1 Well) Drilling and Installation (complete)	$1,113,596			$1,113,596	**100%**
	1. SMS-1 Well Foundation	NA				
	2. Backflush Pit Soils Investigation	NA				
	3. Facilities Design	NA				
	4. Site Permitting	NA				
	5. SMS-1 Pump and Motor	$165,000			$165,000	**100%**
	6. Underground Piping from GJMB	NA				
	7. SMS-1 Downhole Flow Control Valve	$91,300			$91,300	**100%**
	8. SMS-1 Temporary Wellhead Piping	$21,000			$21,000	**100%**
	9. Site Grading for Utilities	$78,000			$78,000	**100%**
	10. Site Grading for Access	NA				
	11. SMS-1 Permanent Equipment	$76,000			$76,000	**100%**
	12. Diversion Wall	NA				
	13. Backflush Pit	$120,000			$120,000	**100%**
	14. Fencing, Paving	NA				
	15. Control Equipment Building	$147,500			$147,500	**100%**
	16. Building Interior; Electrical Control Equipment	$240,000			$240,000	**100%**
	17. SMS-2 Well Drilling and Installation		$1,336,000		$1,336,000	**0%**
	18. SMS-2 Pump and Motor		$182,000		$182,000	**0%**
	19. SMS-2 Downhole Flow Control Valve		$100,400		$100,400	**0%**
	20. SMS-2 Permanent Equipment		$83,600		$83,600	**0%**

Table 7 - Project Budget

Proposal Title:MONTEREY PENINSULA, CARMEL BAY, AND SOUTH MONTEREY BAY INTEGRATED REGIONAL WATER MANAGEMENT PLAN PROJECT IMPLEMENTATION, PHASE 1

Project Title: Seaside Groundwater Basin Aquifer Storage and Recovery Project

	Budget Category	(a) Non-State Share* (Funding Match)	(b) Requested Grant Funding	(c) Other State Funds Being Used	(d) Total	(e) % Funding Match
(e)	**Environmental Compliance/ Mitigation/Enhancement**					
	(Included in cost under Line c above)	NA				
(f)	**Construction Administration**					
	(Included in cost under Line c above)	NA				
(g)	**Other Costs**	NA				
	Subtotal	$3,654,361	$1,702,000	$0	$5,356,361	
(h)	**Construction/Implementation Contingency**					
	20% Contengency (of Subtotal)	$1,071,272			$1,071,272	**100%**
(i)	**Grand Total (Sum rows (a) through (h) for each column)**	**$4,725,633**	**$1,702,000**	**$0**	**$6,427,633**	**74%**

***List sources of funding:** *Use as much space as required.*

The source for "Funding Match" costs is from MPWMD Mitigation Program funds that are collected as a component of the Mitigation User Fee assessed to Cal_Am sytem users within the MPWMD boundary. Any expenditures not associated with Mitigation Program funds will come from the MPWMD general budget and may be reimbursed through (a) existing MPWMD/Cal-Am agreement for the Phase 1 - Santa Margarita site, and (b) future MPWMD/Cal-Am agreement for the Phase 2 - Seaside Middle School site. Phase 1 Site to be completed June 30, 2011; Schedule is focused on completion of Phase 2 Site. "Requested Grant Funding" costs are for drilling and equipping the second well (SMS-2 Well) at the Phase 2 Site.

Attachments:

1. Phase 1 Site - MPWMD/Cal-Am ASR Management & Operations Agreement (MOA)
2. Phase 1 & 2 Site - Proposal for Hydrogeologic and Engineering Services, Pueblo Water Resources, Inc. (PWR)
3. Phase 1 Site - Construction bid price sheet for Facility Building, Wm. Thayer Construction, Inc. (Thayer)
4. Phase 1 Site - Motor Equipment Purchase Orders, MPWMD
5. Phase 1 Site - Shielded Power Cable cost estimate, Kiyoi Engineering (email)
6. Phase 2 Site - Summary of Estimated Budget for Facility Construction
7. Phase 2 Site - Seaside Middle School Phase 2 ASR Site, Proposed Schedule (numbered "Budget Category" lines above correspond to

Budget narrative

Proposed budget for the Phase I ASR Expansion was completed using the costs incurred during the construction of the Phase I facility. The Phase I facility was constructed in 2002, so the budget numbers were inflated to match 2009 dollar values. Bills for major components of this work are included in the application packet for documentation of these costs. Staff and consultant time demands were also estimated from the experience gained from Phase I construction.

a. Salaries and wages

Joe Oliver, Water Resources Division Manager, will act as project lead for the District. His benefits compensated salary rate is $107/hr and he will put a minimum of 10 full time weeks into the project to aid in design, permitting, and construction. The District utilizes a 5 tier step salary advancement program and periodic COLA adjustment. Joe is at the top of his step range.

Jonathan Lear, Senior Hydrogeologist, will act in a supporting role and provide technical assistance during the drilling and construction phase of the injection and monitoring wells. Jonathan Lear has a benefits compensated rate of $74/hour and will put in a minimum of 10 full time weeks into supporting the project lead. The District utilizes a 5 tier step salary advancement program and a yearly COLA adjustment. Jonathan is at the bottom of his step range and will be eligible for 5% increases every November. The District utilizes a 5 tier step salary advancement program and periodic COLA adjustment.

Both Joe and Jonathan are Registered Geologists and Certified Hydrogeologists with the state of California and will complete all work requiring these registrations for the District.

Andy Bell, District Engineer, will provide technical oversight with design of piping network, electrical and control modules, and grading plans. Andy has a salary compensated billing rate of . and will put in a minimum of 5 full time weeks into the project. Andy is a registered engineer with the state of California and will compete the task requiring his registration. The District utilizes a 5 tier step salary advancement program and a periodic COLA adjustment. Andy is at the top of his step range.

Henrietta Stern, Engineering Division Project Manager, will assist the water resources division with coordination of schedules and environmental compliance. Henrietta has a salary compensated wage of and will put in an equivalent of 7.5 full time weeks into the project. The District utilizes a 5 tier step salary advancement program and a periodic COLA adjustment. Henrietta is at the top of her step range.

All sub contractors are required to compensate employees at the prevailing wage for the Monterey Bay Area. All sub contractors listed below participated in design, permitting, construction, and testing of the Phase I facilities and thus bring a store of knowledge to the Phase I Expansion project that will allow them to provide expert assistance. All contractors are local to California and are certified small businesses. Many of the contractors are local to the Monterey Peninsula. The budget reflects the billing method of the sub-contractors. Where appropriate, hourly rates and hours are broken out in the budget or payment for completed construction tasks include sub-contractor labor. Documentation of this is provided with this application in the form of the receipts from Phase I construction.

Padre Associates, INC (AKA Pueblo Water Resources) – was retained as the engineering consultants for the operational project. This firm would be retained to complete engineering drawings required for submittal during the permitting process, complete the as built drawing sets following the construction, and provide construction oversight and management. Padre Engineers have a billing rate of $180 per hour and will put in an estimated 840 hours into the proposed project.

Martin Feeney, Consulting Hydrogeologist – was retained to assist with well design and construction during the last phase of construction for the operational portion of the ASR project. Mr. Feeney would be retained to assist

with the design and installation of the two proposed injection wells as a component of the Phase I expansion. Mr. Feeney has a billing rate of $135/hour and will put in an estimated 270 hours into the proposed project.

Zim Industries, Drilling Contractor – was retained to drill, construct, and develop the injection and monitoring wells. Zim has a long standing working relationship with the District and its quotes are for completed and installed wells. They are budgeted for $2.1 million for the installation of two injection wells and two monitoring wells in the proposed project.

Monterey Peninsula Engineering – was retained to complete the road grading, install the associated piping, complete the tie in with the Cal-Am water distribution system, complete the electrical work, and construct the electrical and chemical building located at the facility. Their role would be to complete $1.3 million of infrastructure construction.

b. Fringe benefits

There are no fringe benefits associated with this project.

c. Travel

Travel by District employees will not occur as a component of this project. Travel, and mobilization will be necessary for contractors and these costs will be included in the estimates by task for each respective contractor.

d. Equipment

Groundwater monitoring system proposed for monitoring this project to comply with SWRCB regulations is manufactured by QED Environmental and can be found at http://www.qedenv.com/Products/Equipment/Products_Overview/.

- Dedicated downhole pumps ($350/ea) – Six dedicated down hole low flow bladder pumps to be used in low flow sampling groundwater as prescribed in the SWQCB permit. Pumps will be left in each well and used to collect water samples.

- Head Unit ($4,000/ea) – Two head units used to control the dedicated downhole pumps. Units hook to compressed carbon dioxide tanks and actuate the pumps.

- Flow through cell ($3,000/ea) – Two flow through cells used to monitor water quality parameters and indicate when parameters stabilize. Cells are used to identify when water produced from the dedicated pumps is representative of the aquifer and is ready to be sampled.

- Storage Shed ($1,500/ea) – Onsite lockable storage shed to house groundwater monitoring equipment.

e. Materials and supplies

Site Facilities and Infrastructure

- Chemical and electrical building will be constructed to house the electrical control and chemical treatment systems. Plans for the building and engineers estimate are included in the application. City of Seaside engineering and architecture departments are currently reviewing the plans.

    - Foundation (Concrete) – 25 cubic yards at $724 per unit. Concrete slab foundation is required to support the weight of the electrical control and chemical treatment facilities to be housed in the building.

- Slab – 1,600 square feet of slab at $16 per square foot. Slab will be poured adjacent to building and will be used to park maintenance vehicles next to the building.

- Poured in place walls – 650 square feet of slab at $30 per square foot. Concrete walls will provide noise control for the facilities housed in the building and weather protection for the electrical control units.

- Poured in place exterior steps – 2 stair sets at $1,000 per unit. Stairs will provide access to elevated foundation from the slab. Elevated slab will provide flooding protection for the electrical control units housed in the building.

- Precast Concrete plank – 1,856 square feet of slab at $11 per square foot. Precast planks will be used to secure and frame the electrical control and water treatment units inside the structure.

- Topping Slab and formed shapes – 2,056 square feet of slab at $7 per square foot. Precast planks will be used to secure and frame the electrical control and water treatment units inside the structure.

- Standard CMU Wall – 3,558 square feet of slab at $17 per square foot. Short wall around the premises of the outer slab.

- Metal Structural - $2,500 for metal structural component used in framing the building.

- Industrial Stair – 2 units at $750 per unit. Indoor stairs to reach the concrete planks where the electrical control units and chemical treatment units are held.

- Guardrail/Handrail – 26 units at $308 per unit. All required guard and hand rails to meet safety requirements.

- Framing and materials - $600 for misc materials related to framing building.

- Roof framing – 1,440 square feet of roof at $10 per square foot. Roof is to extend over the external slab to provide protection from inclement weather for operators.

- Wall Waterproofing – 650 square feet at $7 per square foot. Waterproofing for protection of equipment from moisture damage.

- Caulking and Sealants - $4,500 in calking and sealants to make structure water tight.

- Roofing (Tile) – 1,440 square feet of tile at $19 per square foot. Tile style roof as required by the City of Seaside.

- Rain Gutters - $3,000 in rain gutters to route rain away from the structure.

- Sheet Metal - $4,000 in sheet metal to construct building as designed.

- Doors, Frames, and Hardware - $15,600 in door hardware to complete building as designed.

- Windows - $28,000 in windows and window hardware to construct building as designed.

- Exterior Plaster – 2,774 square feet of plaster at $3 per square foot to meet architectural requirements set by the City of Seaside.

- Roof hatch and Ladder - $2,500 to provide roof access for maintenance of roof and rain gutters.

- Electrical control system ($270,000)– System to operate and control wells and booster pumps. Control system will allow for variable speed operation of injection wells and will tie into PGE 440 volt 4 phase upgraded facilities. Control system will be hooked to a SCADA system currently at site so that it can be locally or remotely operated.

- Bollards ($6,000/ea) – Protective traffic barrier to the wells and buildings housing chemical treatment and electrical controls.

- Water Pipe ($130,000/ea) – Pipe used to inter -connect injection wells constructed during the Phase I Expansion to the existing well field and the Cal-Am system. Price is for installed pipe. Each well will require a tie-in. Documentation is on Monterey Peninsula Engineering receipt for work completed in previous well tie-in.

- Energy Dissipaters ($20,000/ea) – Two energy dissipaters will be required, on for each well. The dissipaters reduce the impact velocity of water entering backflush pits during backflush cycle of the injection wells. The dissipaters prevent erosion of the loosly consolidated sands onsite.

- Baserock ($18,000/ea) – Baserock will be used to cover the roads to each of the two new injection wells. The budget sites two units of baserock, one per well site. Documentation is on Monterey Peninsula Engineering receipt for work completed in previous road construction.

- Disinfection treatment system ($33,000/ea) – One well head treatment system per well (two) are required to disinfect (chlorinate) water when recovered by the wells prior to the water entering the Cal-Am distribution system. Systems specs are consistent with Cal-Am protocol and safety requirements and will be housed in the newly constructed building.

- Vault ($9,000/ea) – Two sub surface vaults to provide access the pipe joint tie-ins for the wells for maintenance of pipes and wellheads.

Well Construction (2)

- Noise control/Sound Barrier ($24,000) – Assemble a noise barrier to meet construction permit requirements for noise control. One barrier is sufficient because it can be moved between the four well drilling locations.

- 34 in dia. Carbon steel conductor casing ($400/LF) – Conductor casing is used in well construction to stabilize the top 50 feet of the borehole while construction of the well is taking place. An estimate of 110 feet will be needed to construct two wells. The casing will be American steel and purchased from American manufactures.

- 22" dia. Stainless steel blank casing ($620/LF) – Blank casing is a component of the finished well and is installed in the borehole above the well screens. An estimated amount of 1,000 LF will be required to construct 2 wells. The casing will be American steel and purchased from American manufactures.

- 20" dia. Stainless steel wire wrapped screen ($320/LF) – Screens allow water to flow into the well. An estimated amount of 400 LF will be required to construct 2 wells. The screens will be American steel and purchased from American manufactures (Johnson screens).

- 20" dia. Stainless steel blank casing ($560/LF) – Blank casing used in well construction and to maintain structural integrity of the well.

- 20" dia. Stainless steel cellar and cap ($11,300/unit) – Installed below the screened interval of the well to collect particles that would otherwise clog the well screens.

- 3" dia. Carbon steel gravel tremie pipe ($12/LF) – Small pipe installed in the well bore and used to place the gravel pack and concrete seals in the bore during well construction.

- 3" dia. Stainless steel sounding pipe ($110/LF) – Small pipe installed adjacent to the eductor pipe inside the outer casing to provide access to the well for the purpose of measuring water levels after the well construction is completed.

- 3" dia. SS chlorination access pipe ($420/unit) – Pipe installed at well head that will provide access for chlorination of water during production prior to the water entering the Cal-Am distribution system.

- Gravel pack ($75/LF) – Gravel installed in the borehole to allow water to pass from the formation to the well screens. Gravel is installed via tremie pipe during well construction.

- Cement grout ($35/LF) – Grout is installed above the gravel pack in the well to seal the well and provide sanitary protection to the water source and protect the integrity of the well. Grout is installed via the tremie pipe during well construction.

- Pump motor and FCV assembly ($200,000) – Two reversible polarity, variable speed drive pumps and pump bowls will be required to inject and recover the wells. This price is documented in the quote from Zim to install the injection wells.

Monitoring Well Construction (2)

- 4" dia. Pvc SCh 80 blank casing ($70/LF) – Casing for monitoring well construction. PVC is used for inert properties.

- Gravel pack ($75/LF) – Gravel installed in the borehole to allow water to pass from the formation to the well screens. Gravel is installed via tremie pipe during well construction.

- Cement grout ($35/LF) – Grout is installed above the gravel pack in the well to seal the well and provide sanitary protection to the water source and protect the integrity of the well. Grout is installed via the tremie pipe during well construction.

f. Contractual

Contractual costs associated with Phase I ASR Expansion are estimated from costs incurred during constriction of the Phase I facility. Quotes and invoices are included in the application to support estimates. If awarded the grant, approval from the Bureau of Reclamation will be obtained before any changes or additions to the task list are implemented.

Chemical and Electrical Building

- Construction and Supervision ($75/hour) – Construction is estimated to take 1,120 man hours to complete.

- Framing Labor ($75/hour) – Framing will require a separate contract to work with the metal structural elements and is estimated to take 288 hours.

- Painting ($40/hour) – External painting is a separate contract and is estimated to take 40 hours.

Site Facilities and Infrastructure

- Grading (roads and pits) – ($12/cubic foot) – an estimated 6,000 cubic feet of earth will need to be excavated and graded into access roads.

- PGE Utility cost for upgrade to service ($60,000/unit) – Cost required for PGE to upgrade electrical facilities on site to 440 volt 4 phase power for the new injection wells. Each well will need the same power upgrade. (Technically this is not an upgrade, but a new power drop.)

Well Construction (2)

- Mobilization ($86,000) – Bid in a unit value is cost for driller to get equipment onsite, mobilize equipment, and prepare to drill. This is bid as a single value so unexpected delays or complications can not increase the cost of mobilization.

- Pilot Bore Drilling ($80/LF) – Cost to drill pilot borehole. Assumed total depth drilled between the two wells is 1,400 feet.

- Geophysical logging ($2,400/unit) – Geophysical logging of borehole provides remote sensing to geological units and provides valuable information used by Distric Staff and Consultants to design well construction specifications. Two boreholes will need to be logged for the proposed project.

- Pilot bore reaming ($40/LF) – After well construction specifications are complete, the borehole is increased in diameter according to specifications.

- Caliper survey ($2,000) – Remote sensing tool used to measure the diameter of the completed borehole. Information is used during well construction.

- Well alignment ($1,800/unit) – Well casing and screen and plumed prior to installation of gravel pack and cement grout seal.

- Well development ($20,000) – Well is pumped, surged, and swabbed to remove fine grained particles left behind from drilling and construction. Performance of well is measured during this process.

- Well testing ($8,500) – Testing of well under operational parameters to measure the performance of well to size pump, pump bowls, and prescribe optimal operational limits and expectations for the finished well. (Extraction only)

- Well disinfection ($1,800) – Sterilize well casing and pump in preparation for install.

- Wellhead construction and pump install ($12,500) – Construct and install pump and pump bowles. Complete sanitary seal of well head.

- Site cleanup ($5,000) – Cost to remove and off haul all debris and garbage. This is bid in one unit so unexpected delays do not cause cost overruns.

- Injection test set up ($45,000) – Complete injection test and measure well performance, aquifer performance, and establish operational protocol for new well.

- Downhole velocity surveys ($9,200) – Measure section of screen that is producing the most water to the well.

- Acceptance video survey ($1,200) – Down hole video survey to document the condition of the well and validate the construction proceeded according to specifications.

Monitoring Well Construction (2)

- Bore Drilling ($40/LF) – Cost to drill pilot borehole. Assumed total depth drilled between the two wells is 1,400 feet.

- Geophysical logging ($2,400/unit) – Geophysical logging of borehole provides remote sensing to geological units and provides valuable information used by Distric Staff and Consultants to design well construction specifications. Two boreholes will need to be logged for the proposed project.

- Well construction ($1,500) – Installation of casing, gravel pack, grout seal, and well heads for monitoring wells.

- Well development ($2,000) – Purge, swab, and scrub wells to remove fines associated with construction.

g. Environmental and regulatory costs

Permitting will be completed by District staff with some technical support from consultants. Time allocated for permitting is listed separate in the budget table. Environmental costs represent 2% of the project budget. This is a low percentage because the CEQA and NEPA documents have been prepared as a component of the Phase I facility construction. Some components of Phase I ARS Expansion may need more confirmation of compliance with CEQA, however the required state and national documents have already been prepared. Additional local required permits for the Phase I ASR Expansion are:

- Monterey County Health Department – ($3,800) Staff time required to obtain well construction permits and file well completion reports.

- City of Seaside – ($3,800) Staff time required to obtain building permit and facilitate inspections for the chemical and electrical buildings.

- State Water Resources Control Board – ($36,000) Staff time required to complete permitting process to divert increased amount of Carmel River water associated with Phase I ASR Expanded project capacity. Time is required to meet reporting requirements, attend meetings, and answer public comments related to the permit.

- California Department of Public Health – ($22,800) Staff time required to obtain compliance with public health standards to operate a water system.

- Regional Water Quality Control Board – ($17,000) Staff time required to obtain permit and establish monitoring protocol to obtain compliance with permit requirements.

h. Reporting

Reporting to the SWRCB and RWQCB are completed on an annual basis as required in the permits. The reports contain river flows, surface and groundwater quality, annual volumes diverted and recovered, and O & M costs. These costs have been accounted for in the annual operations and maintenance calculations.

- Quarterly and financial reports required by Reclamation will be completed by District staff. The Engineering Division Project Manager will complete these reports. ($12,800)

- Injection well testing report and well construction reports will be compiled by consultants and are itemized in the hours allocated to each appropriate consultant. ($11,250)

A substantial amount of monitoring and reporting is already in place to track the effectiveness of this project. Copies of all reports can be made available to Reclamation for their tracking purposes.

i. Other

No other expenses are associated with the proposed project.

j. Indirect costs

No indirect costs have been identified in the proposal

FINAL 7 (4)

Aquifer Storage and Recovery (ASR) Management & Operations Agreement between California American Water and Monterey Peninsula Water Management District

This Aquifer Storage and Recovery (ASR) Management & Operations Agreement (hereafter the "Agreement") between California American Water (hereafter "Cal-Am"), and Monterey Peninsula Water Management District (hereafter "Water Management District" or "District") is entered into as of the date last written below.

RECITALS

WHEREAS, Cal-Am is an investor owned, public utility providing water service to the Monterey Peninsula; and

WHEREAS, the Water Management District is a public agency, authorized in 1977 by the California Legislature (Chapter 527 of the Statutes of 1977, as amended, found at West's Water Law Appendix, Section 118-1, et seq.). The voters of the Monterey Peninsula ratified creation of the Water Management District in June 1978. The District holds comprehensive authority to integrate management of the ground and surface water resources in the Monterey Peninsula area; and

WHEREAS, the Monterey Peninsula has an insufficient supply of water available to it, and whereas this lack of water supply has been exacerbated by the effects of State Water Resources Control Board (SWRCB) Order WR 95-10, and the listing of the California red-legged frog and steelhead as threatened species under the federal Endangered Species Act; and

WHEREAS, Cal-Am and the Water Management District desire to define and clarify means by which they may cooperate and operate Aquifer Storage and Recovery facilities to augment the supply of water available to the Monterey Peninsula for the benefit of Cal-Am's rate payers, and the constituents of the Water Management District; and

WHEREAS, Cal-Am and the Water Management District have a mutual desire to expand and clarify the operations of existing Aquifer Storage and Recovery facilities, and to accelerate implementation of future ASR facilities;

WHEREAS, the California Department of Health Services requires that an Agreement between Cal-Am and the Water Management District clarify and define responsibilities relating to the long-term operation of the Santa Margarita Well;

NOW, THEREFORE, BE IT RESOLVED the parties hereby enter into this Aquifer Storage and Recovery (ASR) Management & Operations Agreement as follows:

1. **Purpose.** This Agreement is intended to set forth general facts and assumptions concerning Aquifer Storage and Recovery (ASR) facilities and operations. This Agreement clarifies areas of joint effort and cooperation between the parties to facilitate present and future actions. The Parties agree to cooperate in order to optimize operation of the Existing ASR Facilities for present use and benefit to the rate payers of Cal-Am, and the constituents of the Water Management District. The Parties agree to further cooperate to facilitate expansion of Existing ASR Facilities and to plan for the creation and operation of Future ASR Facilities.

2. **Parties.** The sole parties to this Agreement are California American Water (hereafter "Cal-Am") and Monterey Peninsula Water Management District (hereafter "Water Management District" or "District"). This Agreement does not confer upon any person or entity, other than the Parties, any rights or remedies, and shall not be enforceable by any third parties.

3. **ASR Facilities.** Any reference in this Agreement to ASR Facilities shall mean all pumps, motors, piping and appurtenant ASR equipment located outside the points of connection to the Cal-Am water distribution system piping. This reference shall include land and rights of way in the City of Seaside and upon former Fort Ord lands relating to existing ASR facilities. The Water Management District shall solely and exclusively own all ASR Facilities, which ownership shall be inclusive of any rights pertaining to permits issued in relation to those ASR facilities. The parties agree to meet and confer, and engage in joint decision-making with respect to any capital improvement, facility modification, and repair or maintenance effort for the ASR Facilities.

4. **Associated ASR Facilities.** The term "Associated ASR Facilities" shall refer to all pipeline modifications, regulating station modifications and booster pump modifications installed within the Cal-Am water distribution system (including all points of connection, but excluding ASR Facilities as defined above, located outside the points of connection) and operated in connection with the Existing ASR. Cal-Am shall solely and exclusively own all Associated ASR Facilities, which ownership shall be inclusive of any rights pertaining to permits issued in relation to those Associated ASR facilities. The parties agree to meet and confer, and engage in joint decision-making with respect to any capital improvement, facility modification, and repair or maintenance effort for the Associated ASR Facilities.

5. **ASR Operator.** Cal-Am shall be the sole operator for all ASR Facilities and all Associated ASR Facilities, except as described in the Santa Margarita Test Injection Well (SMTIW) Aquifer Storage and Recovery (ASR) System, Operation and Maintenance Manual, a copy of which is attached to this Agreement as Exhibit A. Operations shall conform to all requirements set by the California Public Utilities Commission (CPUC) and the Department of Health Services (DHS) to meet the needs of the Cal-Am service area. Operations shall further conform to the water supply budget set by the Water Management District.

6. **ASR Operations.** References in this Agreement to ASR Operations shall mean activities undertaken in accord with the Santa Margarita Test Injection Well (SMTIW) Aquifer Storage and Recovery (ASR) System, Operation and Maintenance Manual, a copy of which is attached to this Agreement as Exhibit A . The Operation and Maintenance Manual may be modified from time to time by the written agreement of the Parties. Any such modification shall be made an exhibit to this Agreement. The term ASR Operations shall refer to both injection and recovery activities, but shall distinguish both Existing ASR and Future ASR, shall distinguish both ASR

Facilities and Associated ASR Facilities, and shall distinguish both Future ASR Facilities and Future Associated ASR Facilities, as those terms are defined by this Agreement. The Operations and Maintenance Manual shall define and designate the sole operator for the SMTIW. With respect to Future ASR, the Operation and Maintenance Manual shall be jointly devised, and modified from time to time by the parties. Cal-Am shall timely and with due diligence repair and/or replace any ASR Facility or Associated ASR Facility, or component thereof, necessary for the full and effective function of either of those Facilities.

7. **Existing ASR.** The term "Existing ASR" shall refer to the existing Santa Margarita Test Injection Well ASR facility (SMTIW), existing appurtenant on-site and off-site facilities, and related lands held by the Water Management District and Cal-Am. Existing ASR shall constitute both ASR Facilities and Associated ASR Facilities as those terms are defined in this Agreement. Existing ASR shall not include any facilities defined as Future ASR, except as may be provided by an addendum or amendment to this Agreement.

8. **Future ASR.** The term "Future ASR" shall refer to Phase I and all other planned phases of Future ASR Facilities that will support the permanent expansion of ASR Operations by the Water Management District and Cal-Am. Future ASR shall be comprised of both Future ASR Facilities and Future Associated ASR Facilities, as those terms may be defined in an amendment or addendum to this Agreement authorized by the Water Management District Board of Directors.

9. **Water Rights.** Cal-Am and the Water Management District agree to cooperate and support the acquisition of water rights needed for the Water Management District Phase I ASR Operations. Cal-Am and the Water Management District shall jointly hold all relevant applications and water rights permits. Cal-Am and the Water Management District further agree to jointly cooperate and support each other's efforts to extract and use water associated with ASR Operations. Cal-Am agrees to withdraw and dismiss, with prejudice, any complaint or protest it has lodged with the State Water Resources Control Board in reference to any aspect of the Water Management District's request to obtain or use water rights associated with its Phase I ASR Operations. Cooperative efforts shall extend to both existing ASR, as well as Future ASR. This Agreement, however, shall not affect or define the right or interest of either Party to store water in the Seaside Groundwater Basin.

10. **Future Water Rights.** Cal-Am and the Water Management District shall enter into good faith negotiations to establish one or more Agreements pertaining to the acquisition and joint ownership of present and future water rights used or usable from any water source suitable to provide potable water for municipal supply for the benefit of the Monterey Peninsula area. Water sources affected by the Agreement(s) for present and future water rights shall include, but shall not be limited to, waters from the Carmel River or any other river, waters subject to appropriation, groundwater, waters deriving from desalination, storm waters, and recycled or reclaimed waters. The intent of the Agreement(s) shall be to enable cooperative use and acquisition of water rights, to prevent and extinguish any complaint or protest to the use or acquisition of water rights by one Party as against the other, and to set terms and conditions relating to the joint ownership and exercise of water rights.

11. **Permits.** Cal-Am and the Water Management District shall cooperate in the acquisition of all permits or approvals required for ASR Operations. The parties agree that they shall

mutually cooperate and support each other's efforts pursuant to this paragraph, as may relate to Existing ASR and Future ASR, as well as to ASR Facilities and Associated ASR Facilities.

12. **Planning & Construction.** Cal-Am shall be the lead entity related to the planning and construction of all Associated ASR Facilities. The Water Management District shall be the lead entity related to the planning and construction of all ASR Facilities. The parties agree to jointly investigate means to minimize expenses of both ASR Facilities and Associated ASR Facilities relating to property acquisition, ownership, construction, and debt issuance. Cal-Am agrees that it shall not treat any cost or expense Cal-Am may incur with respect to ASR Facilities as an investment in utility plant, and as such Cal-Am shall not seek approval of rates from the California Public Utilities Commission that include any profit or return on equity (ROE) that may apply to a capital facilities investment in ASR Facilities.

13. **Long Term License & Franchise.** The Parties intend that the Water Management District shall issue to Cal-Am a fifteen (15) year term license to operate all ASR Facilities. The license shall recognize Cal-Am as the ASR Operator, with operational control over all ASR Facilities and all Associated ASR Facilities, provided those operations conform to the water supply budget set by the Water Management District. This license shall be in the form of a franchise, and it shall be irrevocable during its term, provided Cal-Am fully complies with all terms and conditions of both this Agreement and the License & Franchise, and further provided that Cal-Am continues throughout that term to provide water for the benefit of its customers on the Monterey Peninsula.

14. **Water Charges.** The Parties shall not charge or impose any fee or other expense upon each other, except as otherwise provided for in this Agreement, for the use of the ASR Facilities or the Associated ASR Facilities.

15. **Water Use.** All water produced from storage by either the ASR Facilities or the Associated ASR Facilities shall be held exclusively for the benefit of customers of Cal-Am.

16. **ASR Expenses.** All costs associated with operation of the ASR Facilities or the Associated ASR Facilities, including but not limited to costs of administration, operation, maintenance, repair, replacement, and insurance shall be borne by Cal-Am. Cal-Am shall further reimburse the Water Management District actual and necessary costs it may incur related to the ASR Facilities or the Associated ASR Facilities.

17. **Extraordinary Use of ASR Facilities.** Where the ASR Facilities are utilized by Cal-Am in lieu of operating other water production facilities, and when this operation does not relate to the recovery of water as part of the ASR Operations, then Cal-Am shall pay to the Water Management District for any costs it may incur with respect to the in lieu operation, including but not limited to costs of administration, operation, maintenance, repair and replacement. Cal-Am may operate ASR Facilities for these purposes only upon the advance written consent of the Water Management District.

18. **Effective Date.** This Agreement shall take effect on April 1, 2006.

19. **Renewal Option.** To the extent ASR Facilities or Associated ASR Facilities are constructed having a usable life that exceeds the term of the license and franchise set by Section

12 above, Cal-Am shall have the option to extend and renew this Agreement to coincide with the remaining usable life of those ASR Facilities or Associated ASR Facilities, whichever has the longer remaining usable life. Notice of Cal-Am's intent to exercise this Renewal Option shall be communicated to the Water Management District, in writing, no less than one hundred eighty (180) days prior to the date referenced in Section 12. Cal-Am shall include a statement as to the remaining usable life of those ASR Facilities or Associated ASR Facilities in that notice. The Parties agree to meet and confer, and engage in joint decision-making with respect to determining any question regarding the remaining usable life of either the ASR Facilities or Associated ASR Facilities. Nothing in this paragraph, however, shall be construed to limit the discretion of the Water Management District to cause the early termination of the License & Franchise, as set forth in Paragraphs 13 and/or Paragraph 23 of this Agreement, which provisions shall prevail over the renewal option set forth in this paragraph.

20. **Termination.** The term of this Agreement shall be co-terminus with the term of the License & Franchise set forth in accord with Paragraph 13, 19 and Paragraph 23.

21. **Limitation.** It is understood by the parties that all Agreements, obligations, debts and liabilities of Cal-Am do not constitute the Agreements, obligations, debts and/or liabilities of the Water Management District, its officers, agents and employees. Further, it is understood by the parties that all Agreements, obligations, debts and liabilities of the Water Management District do not constitute the Agreements, obligations, debts and/or liabilities of Cal-Am, its officers, agents and employees.

22. **Public Utilities Commission.** Cal-Am and the Water Management District recognize and acknowledge that Cal-Am is subject to certain regulatory practices and authority of the California Public Utilities Commission (CPUC), and that Cal-Am may require expenditure authorization from the CPUC in order to implement discrete aspects of this Agreement. The Parties agree to work cooperatively, and with due diligence, to obtain any CPUC approval necessary to implement this Agreement.

23. **Assignment.** This Agreement, and rights referenced herein, shall be assignable by either Party only upon the advance written consent of the other Party, which consent shall not be unreasonably withheld. The Water Management District may, in its sole discretion, terminate this Agreement, and any License or Franchise issued pursuant to this Agreement, in the event Cal-Am ceases to provide for the benefit of Cal-Am's customers on the Monterey Peninsula, whether by sale, purchase, eminent domain or other public acquisition.

24. **Arbitration.** In case any disagreement, difference, or controversy shall arise between Cal-Am and the Water Management District with respect to any matter in relation to or arising out of or under this Agreement, whether as to the construction or operation thereof, or the respective rights and liabilities of Cal-Am or the Water Management District, and the parties cannot mutually agree as to the resolution thereof, then such disagreement, difference, or controversy shall be determined by arbitration under the commercial arbitration rules of the American Arbitration Association or upon such other rules as the Parties may agree, provided that the arbitrator shall be a former judge of the Superior Court or the Court of Appeal. Any arbitration hearing shall be noticed and open to the public. The submission to arbitration in accordance with the requirements of this section of any and all agreements, differences, or controversies that may arise hereunder is made a condition precedent to the institution of any

action or appeal at law or in equity with respect to the controversy involved. The award by the arbitrators, provided it shall not exceed the sum of fifty thousand dollars ($50,000), shall have the same force and effect and may be filed and entered, as a judgment of the Superior Court of the State of California and shall be subject to appellate review upon the same terms and conditions as the law permits for judgments of Superior Courts. A "Prevailing Party" shall be determined in the Arbitration, and the prevailing party shall be entitled to reasonable attorney's fees and costs incurred, and accrued interest on any unpaid balance that may be due. Costs shall include the cost of any expert employed in the preparation or presentation of any evidence. All costs incurred and reasonable attorney fees shall be considered costs recoverable in that proceeding, and be included in any award.

25. **Litigation.** In the event a dispute arises relating to performance under this Agreement or regarding the License & Agreement, where the amount or value relating to the controversy exceeds fifty thousand dollars ($50,000), or for any arbitration award that exceeds fifty thousand dollars ($50,000), then and in that event the parties may skip any arbitration requirement, and if already completed, that arbitration shall be deemed advisory. The dispute shall instead be resolved in a court of law competent to hear the matter. Venue for the matter shall be in the County of Monterey. The prevailing party shall be awarded costs of suit, and reasonable attorneys' fees and accrued interest on any unpaid balance that may be due. Costs shall include the cost of any expert employed in the preparation or presentation of any evidence. All costs and attorney fees shall be considered costs recoverable in that proceeding, and be included in any award.

26. **Entire Agreement.** This document represents the entire Agreement between the parties, and supersedes any prior written or oral negotiations and representations between the parties.

27. **Amendment.** This Agreement may be amended or modified only by an instrument in writing duly approved and signed by each party hereto. Any waiver of any terms or conditions must be in writing and signed by the parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement:

Dated: MARCH 28, 2006

David A. Berger
General Manager
Monterey Peninsula Water Management District

3/30/06

Steven D. Leonard
Vice President / Manager
Monterey Coastal Division
California American Water

Exhibit A

SANTA MARGARITA TEST INJECTION WELL (SMTIW)

AQUIFER STORAGE AND RECOVERY (ASR)

SYSTEM

OPERATION AND MAINTENANCE MANUAL

CALIFORNIA AMERICAN WATER
March 24, 2006

SANTA MARGARITA TEST INJECTION WELL (SMTIW)
AQUIFER STORAGE AND RECOVERY (ASR) SYSTEM

OPERATING AND MAINTENANCE MANUAL

March 24, 2006

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SANTA MARGARITA TEST INJECTION WELL (SMTIW)
AQUIFER STORAGE AND RECOVERY (ASR) SYSTEM

OPERATING AND MAINTENANCE MANUAL

March 24, 2006

1.0 INTRODUCTION

The Santa Margarita Test Injection Well (SMTIW) was designed and constructed to serve as part of an Aquifer Storage and Recovery (ASR) system. During the rainy season when treated water is available from Carmel River sources, potable water from the California American Water (CAW) distribution system will be injected into the well. During the summer and fall when the Monterey area is relying entirely on groundwater withdrawals, the well will be available as a source of potable water that can be pumped directly to the distribution system under certain monitoring protocols. Operation of the ASR system is a joint effort between the Monterey Peninsula Water Management District (MPWMD) and CAW, under permitting authority of the California Department of Health Services (DHS).

Scope, and Purpose

On November 30, 2004, CAW submitted an Operations Plan for the Santa Margarita Well to DHS along with other requested information. Following that submittal, a consensus was reached between MPWMD and CAW staff that a more procedural document was needed. As a result, the following document was prepared to be a guide and reference for CAW operators in their daily operation of the SMTIW injection and extraction systems. It contains only information and protocols specific to the SMTIW-ASR system, and its focus is only on the information that may be needed by CAW operators in the field. Though MPWMD plays a critical role in the operation of the system, this document only delineates those areas of responsibility and does not provide additional detail.

This manual is intended to be a working document that will be continually updated as the system is expanded or modified, or to reflect changes in operational procedures or areas of responsibility.

All updates to this document will be made with the mutual written consent of the CAW and MPWMD general managers, and copies of the latest updated version shall be kept at the SMTIW site, and at both the CAW and MPWMD offices.

2.0 SMTIW-ASR SYSTEM DESCRIPTION

I. Operation and Control Strategy

During the rainy season, typically December through May, the SMTIW will be operated in Injection mode to store surplus Carmel River Alluvial Aquifer water for future use. During the dry season, typically June through October, the SMTIW will be operated in Extraction mode and be used as a water supply source for the Monterey system (DHS # 271004).

Piping currently connects the SMTIW to the CAW distribution system at the Luzern Well site and the Paralta Well site. Control wiring currently exists between the SMTIW panel and the panel at the Paralta well site. (When constructed, a proposed piping connection will also connect the SMTIW to the CAW distribution system near the intersection of Hilby Avenue and Luzern St.

A. Injection

Once distribution system valves are set properly, potable water is injected into the SMTIW from the CAW distribution system via the ASR Booster pump located at the Luzern Well (Luzern Well 02). The pump is operated manually from a switch at the Luzern Well Control Panel.

B. Extraction

When the SMTIW is used as a supply source, the SMTIW pump is under automatic control by the PLC settings on the Paralta Well panel. The SMTIW is only used when the Paralta Well is shut down, and vice versa, so the SMTIW is under exactly the same ON/OFF control logic as the Paralta Well.

Water from the SMTIW is pumped to the Seaside Ozone Treatment plant for removal of any hydrogen sulfide and final chlorination prior to distribution. A variable frequency drive (VFD) on the SMTIW well ensures that the pumped flow from the well does not exceed the Seaside Ozone Treatment Plant capacity. The VFD is controlled manually at the SMTIW control panel.

C. Proposed Extraction Method- Direct connection to Seaside distribution system via temporary intertie pipeline along General Jim Moore Blvd.

Chlorinated, potable water from the SMTIW will be pumped directly to the Seaside distribution system via a temporary above- ground pipeline along General Jim Moore Blvd to a connection on Hilby Ave. The SMTIW pump will be configured to run automatically on a timer, since the hydraulic conditions of the Seaside distribution system preclude using automatic control to call the pump based on system pressure or Hilby Tank level. To minimize cycling, the VFD on the pump will also be adjusted manually to match anticipated system demand at the time of

operation. The SMTIW pump will be shut down automatically if an overflow condition is reached at the Hilby Tank, or if pump discharge and pressure conditions indicate a sudden failure of the 16" pipeline along General Jim Moore Blvd.

II. Primary Components

Table-1 Primary Components for the SMTIW-ASR System.

A. ASR Booster Pump	
Location	Luzern Well Site
Type	Standard close-coupled Centrifugal
Motor Size	100 HP
Motor Drive	Single Speed
Power Supply	480 V, 3 PH
Backup Power	Portable Generator
Rated Capacity	2,000 GPM @ approx. 150 ft TDH
Controls	Manual, Switch at Luzern Panel
Discharge Piping Diameter, Luzern Well to SMTIW	12 inch
Approximate Injection Test Flow (2004 season)	Approximately 600-1,450 gpm
Design Injection Flow (best long-term performance)	1,000 gpm
Backflushing Frequency	weekly
B. SMTIW Pump	
Location	SMTIW site
Type	Vertical Turbine
Motor Size	400 HP
Motor Drive	Variable Frequency Drive (VFD) Adjusted to match pump output to Seaside Ozone Treatment Plant Output
Power Supply	480 V, 3 PH
Backup Power	Off-site portable generator. No backup power facilities on-site.
Rated Capacity	2,600 gpm @ approx. 425 ft TDH
Average Extraction Flow (2004 season)	Approximately 1,570 gpm
ON/OFF Control	Automatic (PLC)- switch at Paralta Panel
VFD	Manual rheostat at SMTIW control panel.
Discharge Piping Diameter	12 inch
Typical Backflush Flow (2004 season)	1,700- 2,600 gpm

III. Existing Piping Schematic
Extraction pumping to Seaside Ozone Treatment Plant
(Please refer to Figure-1.)

IV. Existing Valve Locations
(Please refer to Figure-2 and Figure-3.)

V. *Proposed* Extraction System Piping Schematic
Extraction pumping to Seaside distribution system connection at Hilby Ave. and Luzern St.
(Please refer to Figure-4.)

VI. *Proposed* Plan for temporary intertie pipeline along General Jim Moore Blvd. to connection to Seaside distribution system at Hilby Ave and Luzern St., Seaside
(Please refer to Appendix B for description of proposed project.)

3.0 OPERATION

I. INJECTION PROCEDURES

Injection operation is when potable water from the CAW distribution system is pumped back into the SMTIW. This typically happens during the period from December through May.

A. Startup/Shutdown

All startup and shutdown shall be coordinated with MPWMD. After initial startup, temporary shutdown and restart will be required periodically (approximately weekly) as needed for backflushing of the well. This will be also be directed by MPWMD.
MPWMD contact - Joe Oliver, phone 831-658-5640, cell 915-9031.

The specific startup sequence is as follows:

a.) Startup:

1. CAW notifies MPWMD that capacity and demand will allow for injection.
2. MPWMD notifies CAW that it is ready to proceed with injection operations.
3. CAW operators check valves V-1 through V-30 as shown in Table-1 (below) and verify that they are in the "ASR Position". A piping schematic and a map showing the location of each valve are provided in the previous section (Chapter 2).
4. MPWMD adjusts V31, V32, and V33 as required. Operation of these valves will not be the responsibility of CAW operators.
5. Once all valves are set correctly, a CAW operator starts the ASR Booster pump from the control panel located at the Luzern Well site.

b.) Shutdown (reverse of startup sequence):

1. MPWMD notifies CAW that it intends to stop injection operations.
2. A CAW operator shuts down the ASR Booster pump from the control panel located at the Luzern Well site.
3. CAW operators re-position valves V-1 through V-30 as shown in Table-1 (below) and verify that they are in the "Normal CAW Position (Summer)". A piping schematic and a map showing the location of each valve are provided in the previous section (Chapter 2).
4. MPWMD will adjust V31, V32, and V33 as required.

B. Monitoring

There are no additional monitoring responsibilities for CAW operators for the Injection operation. MPWMD may continue to evaluate water quality of injected water as part of the ongoing testing program.

C. Alarm Conditions

There are no additional alarm conditions. Notify MPWMD of booster pump failure. Repair or replace pump as necessary.

D. Emergency Procedures

General CAW emergency protocols apply. **Call 911 for Medical, Fire, or Law Enforcement Emergency.** Follow CAW standard procedures for main breaks or other system emergencies. Notify MPWMD of any emergency that would affect injection operations.

Table -2: Valve Identification and Sequencing for ASR Operations

						EXTRACTION	INJECTION		
	Valve #	Type	Condition	Installation	Location/ Facility	Normal CAW Position (Summer)	ASR Position	ASR Start Up Sequence	ASR Shutdown Sequence
	V1	BF	E	U	Ord Grove @ Luzern	0	X	5	19
	V2	G	N	U	Ord Grove @ Luzern	X	0	21	12
	V3	G	N	A	Luzern	X	0	23	13
	V4	G	N	A	Luzern	X	0/X	25*	1*
	V5	G	N	U	Luzern	X	0	22	14
	V6	BF	E	A	Luzern	0	X	10	15
	V7	G	E	A	Luzern	0	0	e	e
	V8	G	E	A	Luzern	X	0	e	e
	V9	G	E	A	Luzern	0	X	6	16
	V10	G	E	U	Luzern	0	0	e	e
	V11	BF	E	A	Luzern	X/0	X	8	e
	V12	G	E	A	Luzern	X/0	X	9	e
	V13	G	E	A	Luzern	0	X	7	17
	V14	G	E	A	Luzern	X	0	11	18
	V20	G	N	U	Ord Grove @Hacienda	X	0	16	7
	V21	G	N	A	Hacienda Intertie	X	0	17	8
	V22	Ball Valve	N	A	Hacienda Intertie	X	X	18	11
	V23	G	N	A	Hacienda Intertie	X	0	19	10
	V24	G	N	U	Hacienda Intertie	X	0	20	9
	V25	BF	E	U	Ord Grove @ Cemetery	0	X	1	20
	V26	G	E	U	Ord Grove @ Cemetery	0	X	2	21
	V27	G	E	U	03 Treatment Plant	0	X	3	22
	V28	BF	N	A	Paralta	X	0	15	6
	V29	G	E	A	Paralta	0	X	4	e
	V30	G	N	U	Paralta	0	0	14	5
MPWMD ONLY	V31	G	N	A	SMW	X	0	13	4
	V32	G	N	A	SMW	X	X/0	3	3
	V33	G	N	A	SMW	X	0/X	12	e
	PUMP	e	e	e	Luzern	OFF	ON*	24*	2*

MPWMD ONLY

Type: BF= Butterfly, G= Gate, OSY= Outside Stem and Yoke

Condition: E= Existing, N= New

Installation: A= Aboveground, U= Underground

Valve Position: O= Open, X= Closed

***Please refer to previous section for piping schematic and map showing valve locations.**

II. EXTRACTION PROCEDURES -Existing system using Seaside Ozone Treatment Plant Extraction is when the SMTIW is used as a water source for the Monterey system. This occurs during the dry season, typically June through October.

A. Startup/Shutdown

All startup and shutdown shall be coordinated with MPWMD.
MPWMD contact - Joe Oliver, phone 831-658-5640, cell 915-9031.

The specific startup and shutdown sequences are as follows:

a.) Startup:

1. CAW notifies MPWMD that the SMTIW is needed to meet demand and that it intends to proceed with extraction operations.
2. MPWMD acknowledges that CAW will begin pumping from the SMTIW.
3. CAW operators check valves V-1 through V-30 as shown in Table-1 (below) and verify that they are in the "Normal CAW Position". A piping schematic and a map showing the location of each valve are provided in the previous section (Chapter 2).
4. MPWMD will adjust V31, V32, and V33 as required. Operation of these valves will not be the responsibility of CAW operators.
5. At the Paralta Well site, a CAW operator closes the discharge valve on the Paralta Well and opens the valve on the SMTIW pipe connecting to the CAW distribution system.
6. CAW operators will rewire contacts in Paralta Well Panel so that the SMTIW can be operated remotely in AUTO mode from the Paralta Well Panel using the same control logic as the Paralta Well.
7. Coordinate with MPWMD to set the VFD on the SMTIW pump to match current Seaside Ozone Treatment Plant output.
8. After the VFD on the SMTIW pump has been adjusted satisfactorily, a CAW operator places the SMTIW starter switch in the AUTO position at the Paralta Well Panel

b.) Shutdown (reverse of startup sequence):

1. CAW notifies MPWMD of its intent to shut down extraction due to system demand conditions.
2. A CAW operator shuts down the SMTIW pump at the Paralta Well control panel.
3. At the Paralta Well site, a CAW operator opens the valve on the Paralta Well discharge and closes the valve on the SMTIW piping connection to the distribution system
4. A CAW operator re-configures the connections in the Paralta Well control panel so that the Paralta Well pump will be under control of the PLC.

5. A CAW operator places the Paralta Well starter switch in the AUTO position at the Paralta Well Panel.

c.) Alternate startup/shutdown procedure to accommodate CAW operational conditions necessitating interim or temporary use of the SMTIW:

1. CAW notifies MPWMD that startup of SMTIW needed for a temporary specified time period, due to a CAW well or wells being taken offline.
2. MPWMD acknowledges SMTIW use for this purpose.
3. Startup/shutdown procedures as described in Sections 3.0 II. A. a.) and b.) above shall be followed for this use of the SMTIW.
4. If after 15 days of such use of the SMTIW, MPWMD may thereafter give notice of, and hold a hearing if it appears that repair or replacement or other activities necessary to restore CAW facilities are not being completed promptly or diligently. MPWMD shall give CAW not less than 30 days advance written notice for any such hearing, which notice shall set forth the basis of the hearing. Upon considering the evidence presented (including written materials that may be included in an Administrative Record), MPWMD may determine the period of time during which the SMTIW shall continue to be used for this purpose. MPWMD shall give CAW written notice of any such determination, and the determination shall be effective on the 15th day following service of the notice by personal delivery, or by facsimile.

B. Monitoring

Since the SMTIW will be operated as a supply well in place of the Paralta Well, all routine water quality monitoring of the finished water prior to distribution will be in accordance with the existing Seaside Ozone Treatment Plant operating permit with the Department of Health Services (DHS), and otherwise be in compliance with all Title 22 drinking water regulations for groundwater sources. There are no additional routine monitoring responsibilities for CAW operators for the SMTIW Extraction operation.

Additional monitoring for Disinfection Byproducts (DBPs) is required as part of the DHS operating permit for the SMTIW. Sample collection, analysis, and submittal will continue to be under the direction of Leslie Jordan, CAW Water Quality Supervisor (phone 646-3258).

In addition, MPWMD may continue to take samples to evaluate water quality of the extracted water as part of its ongoing testing program.

C. Alarm Conditions

Alarm conditions for disinfectant residual or pump failure are the same as for the Seaside Ozone Treatment Plant.

There are no other alarm conditions.

Notify MPWMD of well pump failure.

D. Emergency Procedures
General CAW emergency protocols apply.
Call 911 for Medical, Fire, or Law Enforcement Emergency.
Follow CAW standard procedures for leaks, equipment failure, or loss of power.

III. *PROPOSED* EXTRACTION PROCEDURES *-Future connection to Seaside distribution system at Hilby and Luzern via temporary intertie pipeline along General Jim Moore Blvd. (To be finalized in accordance with as-built configuration)*

A. Startup/Shutdown
The proposed procedures will be the same as the current procedures, EXCEPT for the following:

1. *Instead of operating the valve at the intertie to the Paralta Well, operators will operate a valve on the intertie pipeline on General Jim Moore Blvd.*

2. *The PLC On/Off controls will be configured to run the SMTIW pump on a pre-set timer. CAW operators will adjust the timer based on specific system demand conditions when the temporary intertie pipeline is put into service.*

3. *The VFD on SMTIW pump will be adjusted manually to match anticipated demand conditions at the time the intertie pipeline is put into service.*

4. *As a precaution to detect abnormal pump operation in the event of pipeline failure, flow and pressure sensors near the pump discharge will shut down the pump on sudden drop in discharge pressure or sudden increase in flow. To prevent operation without chlorination, the hypochlorite feed pump will be interlocked with the SMTIW pump. A dialer will be installed to signal alarm conditions and pump failure.*
5. *To prevent Hilby Tank overflow in the event the altitude valve fails to close on the inlet, the SMTIW pump will shut down if the normal high level setpoint is exceeded.*

B. Monitoring
The proposed procedures will be the same as the current procedures, EXCEPT for the following:

1. *When the extraction system is operating, the above ground pipeline along General Jim Moore Blvd. will be visually checked twice daily for leaks or other signs of damage or immediate failure. At other times of the year it will be checked on a monthly basis for signs of vandalism or other exterior damage.*

2. *Distribution system monitoring for DBPs will be conducted as required from the Seaside distribution system, in accordance with the Stage 2 Disinfection Byproducts Rule (Stage 2 DBPR).*

C. Alarm Conditions

The proposed configuration will have the following Alarm conditions that will shut down the SMTIW pump:

1. *Hilby Tank, High Level*
2. *Sudden Drop in SMTIW Pump Discharge Pressure*
3. *Sudden Increase in SMTIW Pump Flow*
4. *SMTIW Hypochlorite Feed Pump Fail*

D. Emergency Procedures

The proposed procedures will be the same as the current procedures, EXCEPT for the following:

1. Leak or Pipeline Failure

If a leak in the pipeline is discovered or reported, the following response protocol will be followed:

A. *Shut down SMTIW well pump manually.*

B. *Close isolation valves as required along pipeline to isolate leak or damaged area.*

C. *If repair cannot be made quickly (within 2-4 hours), re-configure system to pump to the Seaside Ozone Treatment plant to meet demand while the leak is being repaired.*

D. *Notify affected customers as necessary, depending on severity of damage and duration of repairs, in accordance with CAW standard procedures.*

E. *If vandalism or unreported vehicle accident is suspected, notify the City of Seaside Police Department.*

2. DBP Event

If distribution system monitoring in the Seaside distribution system detects DBPs in excess of the MCLs, the SMTIW pump will be shut down and the system will be reconfigured for extraction through the Seaside Ozone Treatment Plant, as described in Part II.

4.0 MAINTENANCE

The majority of the maintenance procedures for the SMTIW-ASR System are covered under routine maintenance practices for the Paralta Well, or in the Operation and Maintenance Manual for the Seaside Ozone Treatment Plant. Listed here are only the additional responsibilities that arise from the SMTIW-ASR system.

I. Daily

A. Injection System

1. Visually inspect all above-ground piping and valves for leaks or damage and repair if necessary.
2. Inspect ASR Booster Pump seals, adapters, and connections for leaks.
3. Watch and listen to ASR Booster Pump and note any overheating, excess vibration, or unusual noises indicating bearing wear. Schedule repairs as required.

B. Extraction System

1. Visually inspect all above-ground piping and valves for leaks or damage, and schedule repairs as necessary. Notify MPWMD of any abnormal conditions observed at the SMTIW wellhead.
2. Watch and listen to SMTIW Pump Motor and note any overheating, excess vibration, or unusual noises indicating bearing wear. Notify MPWMD of any abnormal conditions.
3. Inspect control panel for any signs of damage. Notify MPWMD of any abnormal conditions.

Proposed Configuration Only:

4. *Verify operation of hypochlorite feed system.*
5. *Verify chemical metering pump discharge rate.*
6. *Verify that the chlorine residual is within range.*
7. *Check supply of hypochlorite solution in storage tank. Order more as needed.*
8. *Check entire feed system for leaks or spills and clean-up as necessary.*
9. *Verify alarm settings and function.*

II. Periodic

A. Injection System

1. Thoroughly clean and inspect ASR Booster Pump and Motor at end of season and replace parts according to manufacturers maintenance schedule.

B. Extraction System

1. Periodic / annual maintenance of the SMTIW Pump and motor will be coordinated by MPWMD. CAW operators will not routinely be involved.

Proposed Configuration Only:

2. *On a monthly basis, CAW operator shall visually inspect above-ground Hilby Pipeline for any signs of leaks, damage, or vandalism.*

5.0 WELL AND AQUIFER PERFORMANCE MONITORING AND MAINTENANCE

CAW Operators will have no additional routine tasks in this area.

I. ASR System Performance Evaluation
Ongoing evaluation of the ASR system performance will be conducted by the MPWMD with input from the CAW Engineering staff and outside consultants. CAW operators will have no direct involvement in this process.

A. Assessment of DBP occurrence and fate in aquifer.
MPWMD and its consultants will coordinate and direct as necessary. CAW will collect and submit DBP samples from the distribution system in accordance with Title 22 regulations regarding Disinfection Byproducts (DBPs).

B. Evaluation/adjustment of long term injection rates and backflushing frequency.
MPWMD and its consultants will coordinate and direct as necessary.

II. Well Screen Maintenance
MPWMD and its consultants will coordinate and direct as necessary.

III. Well Backflushing and Redevelopment
MPWMD and its consultants will coordinate and direct as necessary.

APPENDIX A.

SANTA MARGARITA TEST INJECTION WELL OPERATION AND MAINTENANCE

CONTACT PHONE NUMBERS

FOR MEDICAL OR LAW ENFORCEMENT EMERGENCY, DIAL 911

Agency/Person	Title	Phone
Monterey Peninsula Water Management District (MPWMD)		
Joe Oliver	Water Resources Manager	658-5640; cell 915- 9031
Tom Lindberg	Associate Hydrologist	958-5642; cell 915- 5978
California American Water Operators		
Craig Evans	Production Foreman	646-3250; cell 236-7497
Mike Magretto	Operations Supervisor	646-3220; cell 236-7530
Other Involved Personnel		
Aman Gonzalez	CAW Operations Engineer	646-3230; cell 236-6828
Leslie Jordan	CAW Water Quality Supervisor	646-3258; cell 236-7533
David Norris	CAW Operations Engineering Consultant	659-9230; cell 601-6240
Jan Sweigert	Engineer, Department of Health Services	655-6935
Steve Tanner	Engineering Consultant, Padre Associates	805-683-1233 805-340-3622
Other Agencies		
Fire, Ambulance, Law Enforcement	Emergency	911
Seaside Police Department	(Non-emergency, suspected vandalism to facilities.)	394-6811

APPENDIX B.

AS BUILT DRAWINGS FOR THE TEMPORARY INTERTIE PIPELINE ON GENERAL JIM MOORE BLVD. WITH CONNECTION TO THE SEASIDE DISTRIBUTION SYSTEM AT HILBY AVE. AND LUZERN ST.

(TO BE INCLUDED UPON COMPLETION OF TEMPORARY INTERTIE PIPELINE)

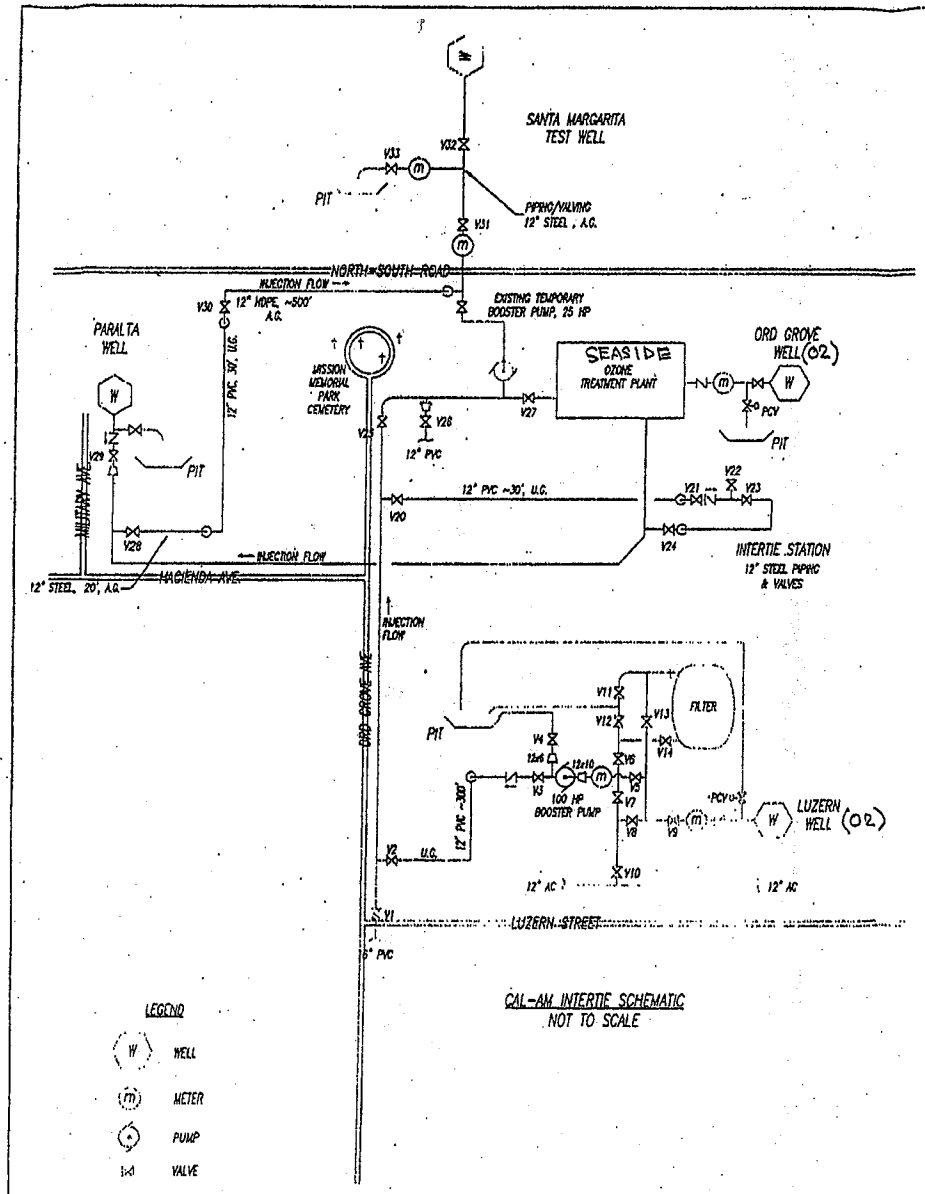


Table -2: Valve Identification and Sequencing for ASR Operations

					EXTRACTION	INJECTION		
Valve #	Type	Condition	Installation	Location/ Facility	Normal CAW Position (Summer)	ASR Position	ASR Start Up Sequence	ASR Shutdown Sequence
V1	BF	E	U	Ord Grove @ Luzern	O	X	5	19
V2	G	N	U	Ord Grove @ Luzern	X	O	21	12
V3	G	N	A	Luzern	X	O	23	13
V4	G	N	A	Luzern	X	O/X	25*	1*
V5	G	N	U	Luzern	X	O	22	14
V6	BF	E	A	Luzern	O	X	10	15
V7	G	E	A	Luzern	O	O	*	*
V8	G	E	A	Luzern	X	O	*	*
V9	G	E	A	Luzern	O	X	6	16
V10	G	E	U	Luzern	O	O	*	*
V11	BF	E	A	Luzern	X/O	X	8	*
V12	G	E	A	Luzern	X/O	X	9	*
V13	G	E	A	Luzern	O	X	7	17
V14	G	E	A	Luzern	X	O	11	18
V20	G	N	U	Ord Grove @Hacienda	X	O	18	7
V21	G	N	A	Hacienda Intertie	X	O	17	8
V22	Ball Valve	N	A	Hacienda Intertie	X	X	18	11
V23	G	N	A	Hacienda Intertie	X	O	19	10
V24	G	N	U	Hacienda Intertie	X	O	20	9
V26	BF	E	U	Ord Grove @ Cemetery	O	X	1	20
V28	G	E	U	Ord Grove @ Cemetery	O	X	2	21
V27	G	E	U	02 Treatment Plant	O	X	3	22
V28	BF	N	A	Paralta	X	O	15	6
V29	G	E	A	Paralta	O	X	4	*
V30	G	N	U	Paralta	O	O	14	5
PUMP	*	*	*	Luzern	OFF	ON*	24*	2*

Type: BF= Butterfly, G= Gate, OSY= Outside Stem and Yoke
Condition: E= Existing, N= New
Installation: A= Aboveground, U= Underground
Valve Position: O= Open, X= Closed

*Please refer to previous section for piping schematic and map showing valve locations.

padre

Figure-1
Piping Schematic for Existing SMTIW-ASR System

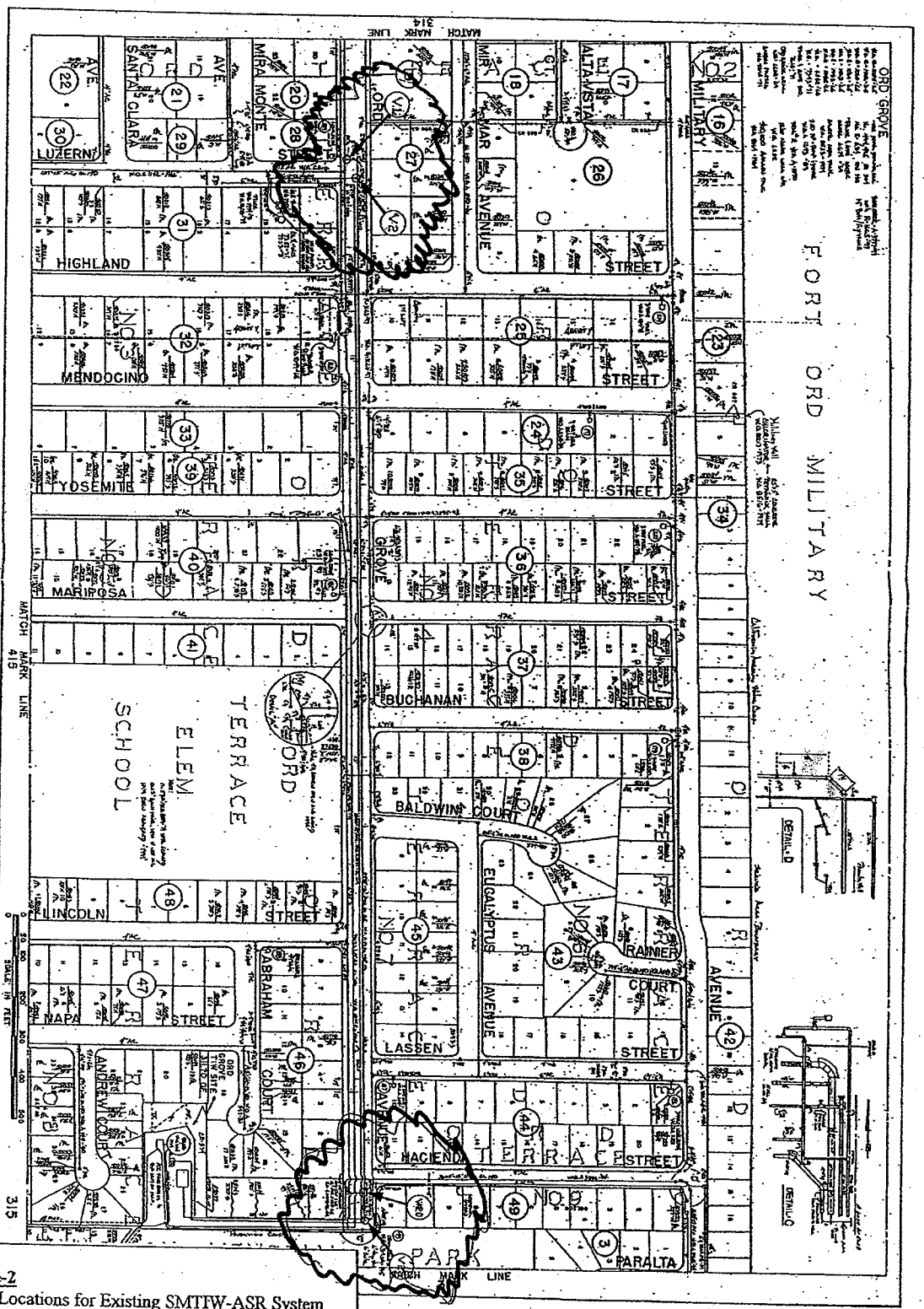


Figure-2
Valve Locations for Existing SMTFW-ASR System

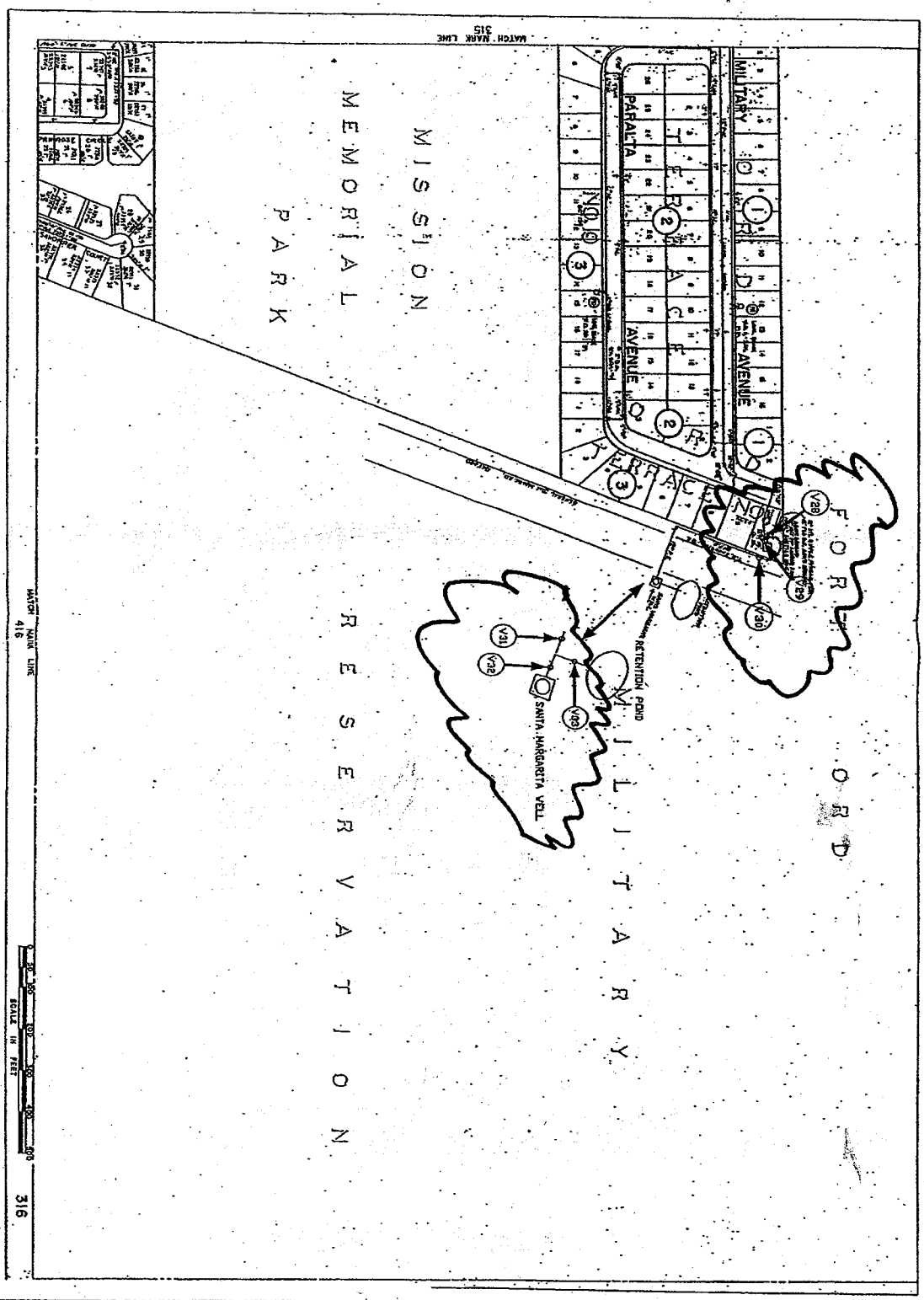
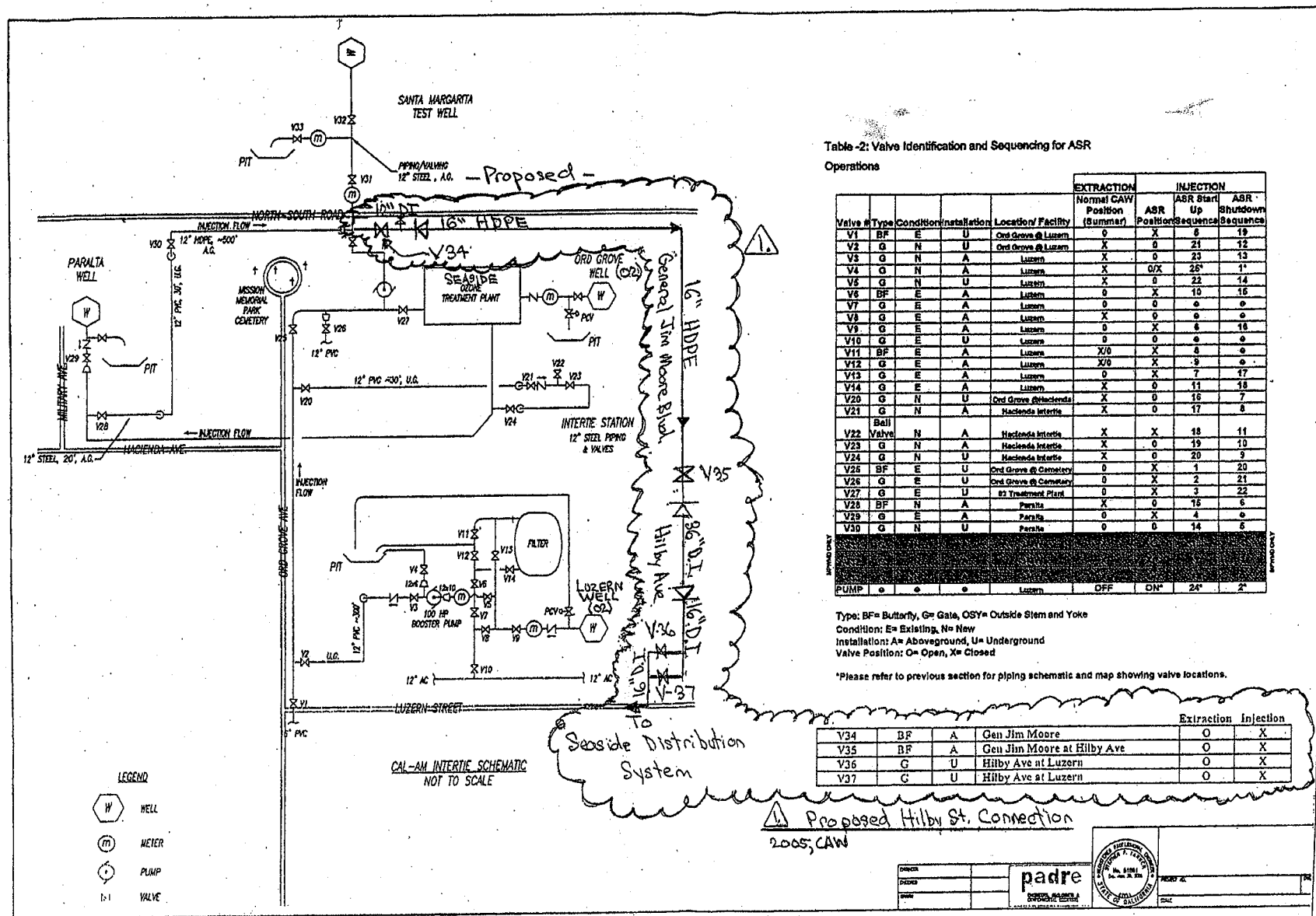


Figure-3
Valve Locations for Existing SMTIW-ASR System



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V2	G	N	U	Ord Grove @ Luzern	X	O	21	12
V3	G	N	A	Luzern	X	O	23	13
V4	G	N	A	Luzern	X	O/X	26*	11*
V5	G	N	U	Luzern	X	O	22	14
V6	BF	E	A	Luzern	O	X	10	15
V7	G	E	A	Luzern	O	O	*	*
V8	G	E	A	Luzern	X	O	*	*
V9	G	E	A	Luzern	O	X	5	16
V10	G	E	U	Luzern	O	O	*	*
V11	BF	E	A	Luzern	X/O	X	5	*
V12	G	E	A	Luzern	X/O	X	9	*
V13	G	E	A	Luzern	O	X	7	17
V14	G	E	A	Luzern	X	O	11	18
V20	G	N	U	Ord Grove @Hacienda	X	O	16	7
V21	G	N	A	Hacienda Intertie	X	O	17	8
V22	Ball Valve	N	A	Hacienda Intertie	X	X	18	11
V23	G	N	A	Hacienda Intertie	X	O	19	10
V24	G	N	U	Hacienda Intertie	X	O	20	9
V25	BF	E	U	Ord Grove @ Cemetery	O	X	1	20
V26	G	E	U	Ord Grove @ Cemetery	O	X	2	21
V27	G	E	U	#2 Treatment Plant	O	X	3	22
V28	BF	N	A	Peralta	X	O	15	6
V29	G	E	A	Peralta	O	X	4	*
V30	G	N	U	Peralta	O	O	14	5
PUMP	*	*	*	Luzern	OFF	ON*	24*	2*

Type: BF= Butterfly, G= Gate, OSY= Outside Stem and Yoke
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Valve Position: O= Open, X= Closed

*Please refer to previous section for piping schematic and map showing valve locations.

				Extraction	Injection
V34	BF	A	Gen Jim Moore	O	X
V35	BF	A	Gen Jim Moore at Hilby Ave	O	X
V36	G	U	Hilby Ave at Luzern	O	X
V37	G	U	Hilby Ave at Luzern	O	X

padre

Figure-4
Piping Schematic for Proposed Connection to Seaside Distribution System (Temporary Intertie Pipeline Along General Jim Moore Blvd.)

October 12, 2010
Project No. 06-0027

Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, California 93942

Attention: Mr. Joe Oliver, Water Resources Manager

Subject: Proposal for Hydrogeologic and Engineering Services: Phase 1 and 2 ASR Projects, Fiscal Year 2010-2011 Program

Dear Mr. Oliver:

In accordance with your request, Pueblo Water Resources, Inc. (PWR) is pleased to submit this proposal for ongoing hydrogeologic and engineering services for the Monterey Peninsula Water Management District (MPWMD or District) Aquifer Storage and Recovery program. Presented in this proposal are a detailed scope of work, schedule, and estimated costs to assist the District with various ASR-related tasks during the remaining period of Fiscal Year 2010-2011 (FY 2010-2011). It should be noted that this proposal is not for new projects, but rather is to complete the work that has been deferred due to District budget cycle and external funding issues. PWR's authorization to perform this work is necessary to maintain existing program direction and to avoid the additional costs and delays associated with re-starting the program.

BACKGROUND

Aquifer Storage and Recovery (ASR) on the Monterey Peninsula involves the diversion of excess flows from the Carmel River system for recharge, storage, and subsequent recovery in the Seaside Groundwater Basin (SGB). The overall objective of the ASR program is to enhance the conjunctive use of water supplies in both the Carmel River and SGB systems. ASR has been pursued by the District since 1996 as a means to augment water supplies on the Peninsula. The District is currently completing an initial phase of the ASR project (Phase 1) and is in the process of developing an expanded ASR project (Phase 2), in cooperation with California American Water (Cal-Am or CAW), based on the success of the Phase 1 program. During Water Year (WY) 2010, the two Phase 1 ASR wells were operated simultaneously for the entire injection season. A total of approximately 1,111 acre-feet (AF) of excess Carmel River system water (treated to Drinking Water Standards) was injected into the SGB, exceeding the projected overall average yield of 920 AFY.

Phase 1. The Phase 1 ASR Project consists of two ASR wells (Santa Margarita ASR-1 and ASR-2) and associated facilities at the so-called Santa Margarita site. The Santa Margarita

ASR-1 and -2 wells were drilled in 2001 and 2007, respectively, and both are screened solely in the Santa Margarita Sandstone aquifer of the SGB.

Although the Phase 1 ASR wells themselves are operational, some of the Santa Margarita site facilities remain to be completed during FY 2010-2011, while additional facilities have been identified for installation at the site to accommodate CAW Coastal Water Project (CWP) operations. Facility items yet to be completed include the following:

- Completion of the Chemical / Electrical Building construction;
- Installation of permanent, full-sized electrical control equipment (VFD, switchgear, etc.);
- Permanent wellhead piping and automation controls;
- Addition of a 40 foot wide pipeline corridor to accommodate new CWP pipelines;
- Redesign of site driveway, hypochlorite loading dock, and proximate grading to accommodate the above-noted CWP lines, and;
- Final site grading, paving, landscaping and fencing, compatible with above additions.

These final facilities and additional site area improvements will allow the facility to be operated at full design capacity (3,000 gpm injection and 5,000 gpm production), and will be compatible with CAW CWP facilities when they are constructed.

The Santa Margarita ASR-2 well is also planned to undergo formal downhole rehabilitation during the fall of 2010. As documented in the WY2009 Summary of Operations Report, ASR-2 experienced a significant decline in performance as a result of residual plugging from testing performed utilizing temporary source water from Marina Coast Water District. Well plugging has reduced the current injection and extraction capacity of ASR-2, and if not mitigated, could also reduce the well's useful service.

It is planned to implement a rehabilitation program at Santa Margarita ASR-2 that is similar to that successfully performed at the site ASR-1 well in 2007. Rehabilitation of Santa Margarita ASR-2 is planned to be performed utilizing the same well contractor (Zim Industries, Inc.) that performed the successful rehabilitation of the site ASR-1 well in 2007. The District recently received a quote from Zim to perform this work and it is anticipated that the District will issue Zim a change order to perform the work under the existing contract with the District for the drilling of the Seaside Middle School ASR Test Well (SMSTW, discussed below).

Phase 2. The Phase 2 ASR Project represents an expansion of the successful Phase 1 ASR Project. The Phase 2 Project is currently planned to consist of two ASR wells and associated facilities, located on an unused portion of the Seaside Middle School (formerly Fitch Middle School), approximately 1,400 feet north of the Santa Margarita site. The so-called Seaside Middle School ASR Test Well (SMSTW) was drilled during the summer of 2010, and is currently undergoing development and production testing. The SMSTW is also screened solely

in the Santa Margarita Sandstone aquifer. The purpose of the SMSTW is to determine the well production characteristics and aquifer parameters of the Santa Margarita Sandstone aquifer underlying the site. Should the testing results prove favorable (as is anticipated), the SMSTW would be converted into a full-scale ASR well (i.e. Seaside Middle School ASR-1), and the site would be improved to include permanent facilities such as permanent pump, piping and automated controls; a backwash pit, and permanent PG&E electrical service and switchgear. Engineered site access via General Jim Moore Blvd would also be included in the facility design.

In order to ready the SMSTW for temporary injection test operations during the WY 2011 recharge season, the following items will need to be implemented:

- Install well pump (either relocate the 400 Hp pump and FCV currently installed at Santa Margarita ASR-1 or obtain rental pump);
- Install temporary piping, meters, valves, instrumentation, etc. at the well (either new temporary equipment or relocated equipment from Santa Margarita ASR-1);
- Modify / improve backflush water disposal piping and percolation field;
- Obtain / install temporary electrical generator and motor switchgear to operate well pump for backflushing operations, and;
- Install temporary fencing / site security for temporary test facilities.

PURPOSE AND SCOPE

We understand that the District anticipates that it will be able to obtain water for recharge operations from the CAW system during WY 2011 as soon as excess Carmel River system water is available per State Water Resources Control Board (SWRCB) water rights permit allowance. The purpose of the proposed work is to: (a) assist the District with completing the remaining Phase 1 project facilities, (b) implement initial well and site improvements at the Phase 2 site, and (c) assist District staff with injection operations at *all three* ASR wells during the upcoming WY 2011 recharge season. Services to be provided during the remainder of FY 2010-2011 (i.e., through June 30, 2011) are related to the following aspects of the ASR program:

Phase 1 ASR Project

- Completion of the remaining Phase 1 ASR Santa Margarita site facilities;
- Preparation of the WY 2010 Summary of Operations Report;
- Implementation of formal downhole rehabilitation of the Santa Margarita ASR-2 well;
- Provision of WY 2011 ASR operations support, and;

- Coordination with CAW regarding site facilities completion, and incorporation of related CAW infrastructure into facilities design.

Phase 2 ASR Project

- Design and installation of temporary well and site improvements required for injection operations at SMSTW;
- Performance of baseline injection testing of SMSTW, and;
- Coordination with CAW for site facilities design, and incorporation of related CAW infrastructure into the facilities.

Miscellaneous ASR Issues

- Coordination with CAW engineering and operations staff regarding general ASR operations and water supply issues.
- Coordination with CAW regarding incorporation of Coastal Water Project (and other CAW ASR projects) into the MPWMD facilities and ASR program.

Scope of Services

Based on our understanding of the District's needs and our experience with this and other ASR projects, we propose to provide the following hydrogeologic and engineering services during the remainder of FY 2010-2011.

Task 1 – Phase 1 ASR Project

Task 1.1 – Santa Margarita Site Engineering and Construction Management. This task includes engineering and construction management services for the completion of the Santa Margarita ASR site facilities which have either not been finalized or require redesign to accommodate recent design decisions from CAW ASR projects, including Coastal Water Project and (C & D Order) "Small Projects" which are now proposed to be integrated to the existing Santa Margarita ASR Facility. Specific work items in this task include the following:

- Design engineering to bring three 16" and two 30" lines into the site for processing (i.e., disinfection and/or disposal), including an additional 40' wide strip easement from the City of Seaside;
- Permitting assistance for acquisition of new land area and permit compliance coordination for ongoing construction work;
- Contract finalization, bidding, and award of work for primary electrical equipment, electrical facilities installation, permanent piping and instrumentation, and final site grading, paving, and fencing;
- Construction management and observation for final facility construction;

- Preparation of facility operations manuals documenting completed facilities and guidelines for system operations and troubleshooting, and;
- Direct construction costs for permanent piping and instrumentation at the ASR-1&2 wells, to allow automated control of injection for the upcoming injection season.

This task also includes additional budget for the extra construction inspection services associated with the requirement of full-time inspection for the Chemical/Electrical Building required by the City of Seaside.

Task 1.2 – Water Year 2010 Summary of Operations Report. This task consists of preparing a Summary of Operations Report (SOR) documenting the recharge operations and analysis of well performance, water quality and level data collected during WY 2010. The overall scope, content, and format of the SOR will be similar to previous SORs we have prepared for the ASR project. Well and aquifer response data collected during WY 2010 will be analyzed for well performance, plugging rates, aquifer parameters and the effects of well interference between Santa Margarita ASR-1 and ASR-2. Conclusions and recommendations will be made regarding the ongoing operation and maintenance of Santa Margarita ASR-1 and ASR-2 (i.e., long-term injection rates, backflushing frequency, etc). It is also noted that the annual preparation and submittal of SORs is a requirement of the Central Coast RWQCB for the Phase 1 ASR Project.

Task 1.3 – Santa Margarita ASR-2 Rehabilitation Management and Oversight. This task will involve the coordination and oversight of the rehabilitation of the Santa Margarita ASR-2 well. Prior to contractor mobilization, PWR will coordinate a pre-construction meeting to introduce involved parties, establish chain-of-command and communications protocols, review the key work elements and safety procedures, and develop a schedule of the work to be performed. During the rehabilitation of the well, PWR will oversee and document contractor activities to ensure adherence to the project specifications. We will document materials and quantities of well rehabilitation chemicals, field water quality parameters, and production rates during airlifting and pumping. PWR will also monitor and document the handling and discharge of fluids produced from the well during rehabilitation. Following well rehabilitation and replacement of the permanent pump and FCV, PWR will perform performance tests through which the success of the rehabilitation work can be evaluated.

Task 1.4 – Water Year 2011 Operations Support. This task consists of providing operational support for the Phase 1 ASR Project during the WY 2011 recharge season. This includes the development of the WY 2011 ASR operations program, attendance at various meetings during the course of the project, providing as-needed field assistance, and overall project management.

Task 1.4.1 – Project Management and Meetings. PWR will review existing conditions at the site and meet with District and CAW staff at a kick-off meeting to discuss WY 2011 program goals and scheduling. As part of this task, the Phase 1 ASR Project schedule (Gantt Chart) will be updated and maintained. In addition, it is anticipated that on-going “ASR Coordination”

meetings between the District and CAW will continue during the FY 2010-11 period. Consistent with past practice, it is assumed that meetings will be held on an approximate monthly basis and will be attended by a PWR Principal Engineer and/or Hydrogeologist, depending on meeting agenda and project needs at the time. To the extent feasible, PWR attendance at meetings will be coordinated with other project tasks.

Task 1.4.2 – WY 2011 ASR Program Implementation and Field Assistance. This task includes providing as-needed assistance to District and CAW staff with on-going ASR operations, data collection, and water sampling during the WY 2011 program. This will include assistance with the startup of WY 2011 ASR operational phases and periodic downloading and maintenance of project dataloggers. This task also includes the provision of field assistance on an as-needed/requested basis to address critical project needs as they arise. For budgetary purposes and based on our experience during WY 2010, we have assumed this task will involve an initial three-day field visit at the startup of the recharge season and periodic two-day follow-up visits during the season on an approximate monthly basis. This task is an important coordination element during this year as ASR injection and extraction operations transition to the full responsibility of CAW operators under CAW's permit oversight by the California Department of Public Health.

It is our understanding that the District and/or CAW will be responsible for implementing the WY 2011 Sampling and Analysis Plan (SAP). This includes routine field parameter monitoring and the collection/delivery of grab samples to a State Certified Analytical Laboratory (e.g., Monterey Bay Analytical Services, located near the District's office in Ryan Ranch) for SAP analyses. PWR will assist with these efforts on an as-needed/requested basis.

Task 1.4.3 – Santa Margarita ASR-2 Temporary Power. This task consists of providing a temporary power supply to support operation of the Santa Margarita ASR-2 well motor during routine backflushing operations during the WY 2011 injection season. This is needed due to the fact that permanent electrical facilities are not yet completed and will ultimately be located inside the Chemical/Electrical building, which is currently under construction. Pacific Gas & Electric will not install the new upgraded transformer until the new electrical control equipment is in place inside the Facility building; it is currently estimated that this service connection will not be made until March 2011. The temporary power supply is anticipated to be similar to that which was employed during the WY 2010 injection season, consisting of a generator and temporary electrical control panel, to be operated manually. This equipment will be secured and onsite to be capable of conducting well backflushing operations by December 1, 2010. For budgetary purposes, it is assumed that the rental period will be for five months. If feasible, an alternate generator source may be provided by CAW for this purpose, but this is not yet confirmed.

Task 1.5 – Engineering Coordination with CAW, MCWD and City of Seaside for Phase 1 ASR. Completion of the Phase 1 ASR facilities will require ongoing coordination with involved agencies to avoid duplication (or conflict) with utilities and system infrastructure currently being contemplated by CAW for the Coastal Water Project (CWP), Marina Coast Water District (MCWD), and Fort Ord Reuse Authority (FORA) in the proximate area; particularly within the General Jim Moore Boulevard (GJM Blvd) corridor. It is anticipated that at

least 6 meetings will be convened with the various agencies and stakeholders to evaluate and resolve issues related to concurrent projects coordination. For budgetary purposes, we have estimated 6 one-day meetings in Monterey and 24 hours of associated time for this task.

Task 2 – Phase 2 ASR Project

Task 2.1 – Implementation of Temporary Well and Site Improvements at SMSTW. This task consists of the design, engineering, and implementation of temporary equipment and site improvements at the SMSTW in order to ready it for injection testing during WY 2011. Specific work items for this task include the following:

- Design / select temporary and/or permanent pump for use in well backflushing, and for injection operations (i.e., inclusion of Baski Flow Control Valve) to allow ASR operations in winter 2011;
- Design and procurement of temporary electrical supply (i.e., portable generator) and switchgear to operate the well pump;
- Coordinate setup of temporary aboveground piping valving, and instrumentation at site to facilitate injection operations. Reuse of temporary piping from the Santa Margarita site will be utilized to the greatest extent possible. Field coordination with contiguous CAW transmission main piping will be included as part of this work;
- Construction management for above noted work items, including solicitation of bid quotations, coordination with contractors, and field observation / coordination of construction / installation activities, and;
- Permitting application assistance and coordination with permitting agencies for above work items.

Task 2.2 – SMSTW Baseline Injection Testing. This task consists of performing baseline injection testing of the SMSTW. The primary purpose of the testing is to establish the baseline injection well hydraulics and performance of the new SMSTW. Primary issues to be investigated include:

- Determination of injection well efficiency and specific capacity;
- Evaluation of injection well plugging rates (both active and residual);
- Determination of optimal rates, frequency, and duration of backflushing in order to maintain long-term injection capacity;
- Determination of long-term sustainable injection rates, and;
- Determination of mutual well interference effects between the SMSTW and the two ASR wells at the Phase 1 Santa Margarita site.

The baseline testing program for the SMSTW is envisioned to include the following steps:

1. Startup testing of injection piping hydraulics, instrumentation, metering, valving, etc.;
2. 16-hr variable rate injection testing combined with downhole velocity surveys;
3. 24-hr constant rate injection test;
4. 7-day constant rate injection test;
5. Backflushing between each injection test, and;
6. Post-injection production performance testing.

At the conclusion of the baseline testing program, a brief technical memorandum will be prepared documenting the testing results and presenting conclusions and recommendations for the long-term injection operations during the remainder of the WY 2011 recharge season and beyond.

Task 2.2.1 – SMSTW Temporary Power. This task consists of providing a temporary power supply to support operation of the SMSTW well motor during backflushing operations during baseline injection testing and the WY 2011 injection season. The temporary power supply is anticipated to be similar to that which was employed during the WY 2010 injection season at Santa Margarita ASR-2, consisting of a generator and temporary electrical control panel, to be operated manually. This equipment will be secured and onsite to be capable of conducting well backflushing operations by December 1, 2010. For budgetary purposes, it is assumed that the rental period will be for two months (i.e., during the highest flow winter months when the most excess water is anticipated to be available for diversion and testing at this new well facility).

Task 2.3 – Engineering Coordination with CAW, MCWD and City of Seaside for Phase 2 ASR. Similar to the Phase 1 ASR Project, implementation of the Phase 2 ASR facilities will require coordination with involved agencies to avoid duplication (or conflict) with utilities and system infrastructure currently being contemplated by CAW for the Coastal Water Project (CWP) and Marina Coast Water District (MCWD), and FORA in the proximate area, particularly within the GJM Blvd corridor. It is anticipated that at least 3 meetings will be convened with the various agencies and stakeholders to evaluate and resolve issues related to concurrent projects coordination. For budgetary purposes, we have estimated 3 one-day meetings in Monterey and 12 hours of associated time for this task.

Services Not Included

Services which are (or may be) necessary for the completion of this project, which are not included in our proposal include the following:

- Data-loggers and transducers for the Phase 1 ASR Project wells, SMSTW, and other existing SGB monitoring wells (assumed District provided);
- PG&E application or processing fees for initiation of electrical service for the SMSTW site;

- Water quality sampling and analyses (assumed District provided);
- Construction of Phase 1 site facilities (except as noted);
- Permit fees;
- Cost of water, electricity, or other utilities, and;
- Any others items not specifically included in PWR's scope of services.

Estimated Fees and Schedule

Based on the scope of services presented herein, we estimate the fees for our services will be approximately $667,943, which will be billed on a time-plus-expenses basis in accordance with our current Fee Schedule (attached). An estimated fee summary worksheet is attached summarizing the estimated man-hours and costs per task/work item. A 10 percent contingency has been noted in the attached budget summary (total with contingency is $734,737) in the event that unforeseen project complications or constraints arise. We recommend the contingency be held for authorization by District staff upon written justification by PWR.

We understand that in order to authorize this work, your Board must first approve a formal contract amendment. Based on our current workload, we believe that we can commence work within two weeks of your authorization.

We appreciate the opportunity to provide assistance to the District on this important water supply project. If you require additional information regarding this or other matters, please call us.

Sincerely,

PUEBLO WATER RESOURCES, INC.

Robert C. Marks, P.G., C.Hg
Principal Hydrogeologist

Stephen P. Tanner, P.E.
Principal Engineer

RCM:SPT

Attachments: 2010 Fee Schedule
Cost Estimation Spreadsheet

PUEBLO WATER RESOURCES, INC
2010 FEE SCHEDULE

Professional Services

Principal Professional	$165/hr
Senior Professional	$150/hr
Project Professional	$135/hr
Staff Professional	$105/hr
Technician	$ 95/hr
Drafting	$ 90/hr
Word Processing	$ 60/hr

Other Direct Charges

Subcontracted Services	Cost Plus 15%
Outside Reproduction	Cost Plus 15%
Travel Expenses	Cost Plus 15%
Per Diem*	$ 150/day
Vehicle	$ 75/day

Equipment Charges

Drilling Fluid Test Kit	$100/day, $400/week
Hach DR890	$75/day, $275/week
Orion ORP/pH/Temp Probe	$75/day, $275/week
In-Situ Hermit 3000 and Transducer	$125/day, $400/week
In-Situ Mini-Troll/Level Troll	$100/day, $300/week
Fuji Ultrasonic Flowmeter	$200/day, $750/week

*Regionally and seasonally specific to project.

PUEBLO WATER RESOURCES, INC • 4478 Market Street, Suite 705 • Ventura, CA 93003
805.644.0470 • 805.644.0480 FAX

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Professional Services for Phase 1 and 2 ASR Projects

Fiscal Year 2010-2011

PWR Project No.: 06-0027

ESTIMATED FEE SUMMARY

LABOR		Principal Professional	Senior Professional	Project Professional	Staff Professional	Technician	Drafting	WP	Hours by Task	Estimated Task Cost
	Hourly Fee	$165	$150	$135	$105	$95	$90	$60		
Task No.	Task Description									
1	**Phase 1 ASR Project**									
1.1	SM Site Engineering and Construction Mgmt	325	-	290	-	-	150	-	765	$106,275
1.2	WY2010 Summary of Operations Report	50	80	30	-	-	10	10	180	$25,800
1.3	ASR-2 Rehabilitation Oversight	20	130	40	-	-	-	-	190	$28,200
1.4	WY2011 Operations Support	100	200	80	-	-	-	-	380	$57,300
1.5	Engineering Coordination with CAW, CWP,MCWD	80	-	-	-	-	6	-	86	$13,740
1.6		-	-	-	-	-	-	-	0	$0
1.7		-	-	-	-	-	-	-	0	$0
								Task 1 Subtotal	***1601***	***$231,315***
2	**Phase 2 ASR Project**									
2.1	SMSTW Temporary Site Improvements Engineering	60	-	-	-	-	40	-	100	$13,500
2.2	SMSTW Baseline Injection Testing	30	120	-	-	-	3	2	155	$23,340
2.3	Engineering Coordination with CAW, CWP,MCWD	40	-	-	-	-	4	-	44	$6,960
2.4		-	-	-	-	-	-	-	0	$0
2.5		-	-	-	-	-	-	-	0	$0
								Task 2 Subtotal	***299***	***$43,800***
	Hours by Labor Category:	705	530	440	0	0	213	12		
	Costs by Labor Category:	$116,325	$79,500	$59,400	$0	$0	$19,170	$720		
								Total Labor Hours:	**1900**	
								Total Labor Costs:	**$275,115**	

OTHER DIRECT COSTS (ODC's)			Unit	No. of	
Task No.	Item	Units	Price	Units	Fee
1	Vehicle	Daily	$75	45	$3,375
1	Travel Per Diem	Daily	$150	45	$6,750
2	Vehicle	Daily	$75	15	$1,125
2	Travel Per Diem	Daily	$150	15	$2,250
				Subtotal ODCs:	**$13,500**

OUTSIDE SERVICES			Unit	No. of	
Task No.	Item	Units	Price	Units	Fee
1.1	Engineering Subconsultants	Lump Sum	$72,100	1	$72,100
1.4	ASR-2 Generator Rental	Monthly	$9,650	5	$48,250
1.6	ASR 1 & 2 permanent piping construction costs	Lump Sum	$153,000	1	$153,000
2.1	SMSTW Engineering subconsultants	Lump Sum	$4,200	1	$4,200
2.2	SMSTW Downhole Velocity Surveys	Lump Sum	$5,000	1	$5,000
2.2	SMSTW Generator Rental	Monthly	$14,400	2	$28,800
2.4	SMSTW Temporary piping construction costs	Lump Sum	$18,500	1	$18,500
				Subtotal Outside Services:	**$329,850**
				Subtotal Outside Services w/ Markup (15%):	**$379,328**

COST SUMMARY	
Labor	**$275,115**
Other Direct Costs	**$13,500**
Outside Services	**$379,328**
Subtotal:	**$667,943**
10 % Contingency	**$66,794**
TOTAL ESTIMATED PROJECT COST:	**$734,737**

William A. Thayer Construction, Inc.

2600 Garden Road, Suite 215
Monterey, CA 93940
Contractors Lic. No. 605259

TO

Monterey Peninsula Water Management District
5 Harris Ct., Bldg. G
Monterey, CA 93940

Project: Santa Margarita ASR Facility Bldg.
Date: Wednesday, January 27, 2010
Time: 2:00 p.m.

The undersigned agrees, if awarded the contract, that there shall be paid by the undersigned and all subcontractors under him, to all laborers, workmen, and mechanics employed in the execution of such contract or any subcontract thereunder, not less than the general prevailing rate of per diem wages, and rates for overtime and legal holidays in the locality in which the work is to be performed, as established by the State Director of the Department of Industrial Relations.

The undersigned currently possesses and agrees to maintain a valid **Class A or Class B Contractor's License** issued by the State of California while the work is being prosecuted.

Bidder: William A. Thayer Construction, Inc. Tax I.D. Number: 55-0788612

Business Address: 2600 Garden Rd., Ste. 215, Monterey, CA 93940

Contractor's License No.: 605259 Telephone: (831) 641-9147

By: William A. Thayer Dated: January 27, 2010

Title: President

PUEBLO water resources

CONTRACTOR'S PROPOSAL FORM

Project: **MONTEREY PENINSULA WATER MANAGEMENT DISTRICT**
MONTEREY COUNTY, CALIFORNIA

Contractor: William A. Thayer Construction, Inc.

Proposed Project Team:

Project Manager: Robert Love

Superintendent: TBD

Bid Price / OH&P Fee Proposal:

Estimated Total Bid Price of Project as Designed: $ 469,000.00

Overhead Fee: 8% Included with total

Profit Fee: 4% Included with Total

Fee Calculation (indicate how fee is calculated, indicate Guaranteed Maximum Cost):

Percentage Based

General Conditions Cost Proposal: $23,968.00 Included with total

Project Schedule Comments: Rough draft of Criticle Path Included

Public Liability & Property Damage Insurance Cost (@ $700,000): $2,730.00

Worker's Compensation Insurance Experience Factor: 1.21%

Trades which you typically or often Self-Perform: Demolition, concrete, Carpentry (Rough/Finish), Sitework

Union Affiliations: None

Signed: [signature]

Title: President

Date: 1/27/10

PUEBLO water resources

CONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The bidder has been engaged in the contracting business, under the present business name for 20 years. Experience in work of a nature similar to that covered in the bid extends over a period of 15 years.

The bidder, as a contractor, has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet if necessary.) N/A

Signed: _____

Title: President

Date: 1/27/10

PUEBLO water resources

NONCOLLUSION AFFIDAVIT

TO BE EXECUTED
BY BIDDER AND SUBMITTED WITH BID

State of California)

) ss.

County of Monterey)

William A. Thayer being first duly sworn, deposes and says that he or she is President of William A. Thayer Construction, Inc. the party making the foregoing bid; that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true, and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Signature

1/27/10
Date

The title of the affidavit provides that it is "to be executed by bidder and submitted with the bid."

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we William A. Thayer Construction, Inc.

as Principal, hereinafter called the Principal, and The Ohio Casualty Insurance Company

a corporation duly organized under the laws of the State of Ohio as Surety, hereinafter called the Surety, are held and firmly bound unto Monterey Peninsula Water Management District

as Obligee, hereinafter called the Obligee, in the sum of ten percent of the amount bid---------- Dollars 10%----------

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for Santa Margarita Aquifer Storage and Recovery Project Chemical/Electrical Building, Seaside, CA

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee my in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 25th day of January 2010

William A. Thayer Construction, Inc.
(Principal) (Seal)

(Title)

The Ohio Casualty Insurance Company
(Surety) (Seal)

(Title)
Danijela L. Mosunic , *Attorney-In-Fact*

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Santa Clara

On January 25, 2010 (Date) before me, Patricia K. Simicich, Notary Public (Here Insert Name and Title of the Officer),

personally appeared Danijela L. Mosunic (Name(s) of Signer(s))

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

PATRICIA K. SIMICICH
Commission # 1769525
Notary Public - California
Santa Clara County
My Comm. Expires Sep 21, 2011

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Signature of Notary Public)

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
- ☐ Individual
- ☐ Corporate Officer — Title(s): _____
- ☐ Partner — ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name: _____
- ☐ Individual
- ☐ Corporate Officer — Title(s): _____
- ☐ Partner — ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

CERTIFIED COPY OF POWER OF ATTORNEY
THE OHIO CASUALTY INSURANCE COMPANY

No. 41-823

Know All Men by These Presents: That THE OHIO CASUALTY INSURANCE COMPANY, an Ohio Corporation, pursuant to the authority granted by Article III, Section 9 of the Code of Regulations and By-Laws of said Company, does hereby nominate, constitute and appoint: **Francis E. Cook, Charles M. Griswold or Danijela L. Mosunic of San Jose, California** its true and lawful agent (s) and attorney (s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety, and as its act and deed any and all BONDS, UNDERTAKINGS, and RECOGNIZANCES, not exceeding in any single instance **FIVE MILLION ($5,000,000.00) Dollars,** excluding, however, any bond(s) or undertaking(s) guaranteeing the payment of notes and interest thereon

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in Fairfield, Ohio, in their own proper persons.
The authority granted hereunder supersedes any previous authority heretofore granted the above named attorney(s)-in-fact.

In WITNESS WHEREOF, the undersigned officer of the said The Ohio Casualty Insurance Company has hereunto subscribed his name and affixed the Corporate Seal of the said The Ohio Casualty Insurance Company this **20th** day of **November, 2008.**

SEAL

Mark E. Schmidt

Mark E. Schmidt, Assistant Secretary

STATE OF OHIO,
COUNTY OF BUTLER

On this **20th day of November, 2008** before the subscriber, a Notary Public of the State of Ohio, in and for the County of Butler, duly commissioned and qualified, came **Mark E. Schmidt, Assistant Secretary** of THE OHIO CASUALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in, and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn deposes and says, that he is the officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate Seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporation.
IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal at the City of Hamilton, State of Ohio, the day and year first above written.

Cheryl S. Gregory

Notary Public in and for County of Butler, State of Ohio
My Commission expires August 5, 2012.

This power of attorney is granted under and by authority of Article III, Section 9 of the Code of Regulations and By-Laws of The Ohio Casualty Insurance Company, extracts from which read:

Article III, Section 9. Appointment of Attorneys-in-Fact. The Chairman of the Board, the President, any Vice-President, the Secretary or any Assistant Secretary of the corporation shall be and is hereby vested with full power and authority to appoint attorneys-in-fact for the purpose of signing the name of the corporation as surety to, and to execute, attach the seal of the corporation to, acknowledge and deliver any and all bonds, recognizances, stipulations, undertakings or other instruments of suretyship and policies of insurance to be given in favor of any individual, firm, corporation, partnership, limited liability company or other entity, or the official representative thereof, or to any county or state, or any official board or boards of any county or state, or the United States of America or any agency thereof, or to any other political subdivision thereof

This instrument is signed and sealed as authorized by the following resolution adopted by the Boards of Directors of the Companies on October 21, 2004:

RESOLVED, That the signature of any officer of the Company authorized under Article III, Section 9 of its Code of Regulations and By-laws and the Company seal may be affixed by facsimile to any power of attorney or copy thereof issued on behalf of the Company to make, execute, seal and deliver for and on its behalf as surety any and all bonds, undertakings or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment. Such signatures and seal are hereby adopted by the Company as original signatures and seal and shall, with respect to any bond, undertaking or other written obligations in the nature thereof to which it is attached, be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATE

I, the undersigned Assistant Secretary of The Ohio Casualty Insurance Company, do hereby certify that the foregoing power of attorney, the referenced By-Laws of the Company and the above resolution of its Board of Directors are true and correct copies and are in full force and effect on this date.
IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the Company this 25th day of January A.D., 2010

SEAL

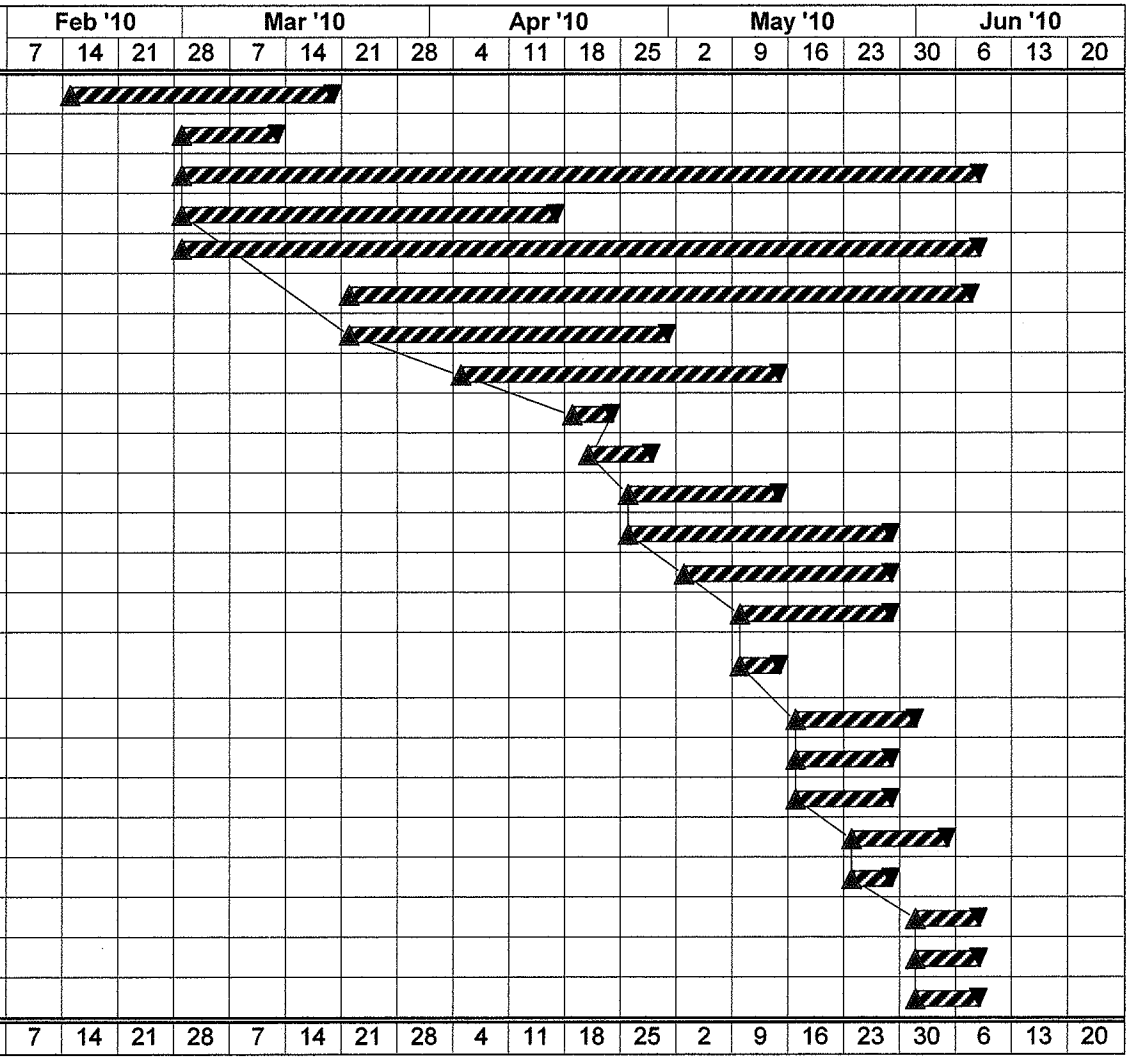
Sam Lawrence

Assistant Secretary

SANTA MARGARITA ASR PROJECT

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Activity Name	Start Date	Finish Date
submittals	2/15/10	3/19/10
mobilization	3/1/10	3/12/10
supervision	3/1/10	6/8/10
sitework	3/1/10	4/16/10
project duration	3/1/10	6/8/10
electrical	3/22/10	6/7/10
cip concrete	3/22/10	4/30/10
concrete masonry	4/5/10	5/14/10
precast concrete	4/19/10	4/23/10
topping slab	4/21/10	4/28/10
rough carpentry	4/26/10	5/14/10
misc metals	4/26/10	5/28/10
sheet metal flashing	5/3/10	5/28/10
drywall	5/10/10	5/28/10
windows and glazing	5/10/10	5/14/10
plaster/stucco	5/17/10	5/31/10
clay tile roof	5/17/10	5/28/10
pvc roofing	5/17/10	5/28/10
painting	5/24/10	6/4/10
doors and hardware	5/24/10	5/28/10
punch list	6/1/10	6/8/10
close out	6/1/10	6/8/10
final cleanup	6/1/10	6/8/10



Portion (Type) of Work	Name of Subcontractor	Location and Place of Business
Rebar	Acme Steel Inc.	990 Mesa Grande Rd., Aptos, CA
Concrete	Jeffrey Concrete	537 Anthony St., Monterey, CA
Sitework	James Sommerville, Inc.	21925 Rosehart Wy, Salinas, CA
Precast Concrete	Hansen Structural Precast ~~Kie Con~~	~~3551 Wilbur Ave., Antioch, CA~~ 13131 Los Angeles St; Irwindale, CA
Roofing Tile/Waterproofing	Andy's Roofing	897 Ames Ave., Milpitas, CA
Membrane Roofing	California Single Ply, Inc.	P.O. Box 2799, Rocklin, CA
Paint	Saleh Painting	407 Reservation Rd., Marina, CA
Stone Wall Caps	Albert Tile Co., Inc.	1343 David Ave., Monterey, CA
Windows	Signature Glass	19 Quail Run Cr., Ste. E, Salinas, CA
Masonry	Cornerstone Masonry, Inc.	P.O. Box 3617, Salinas, CA
Misc Metals	~~Monterey Structural Steel, Inc.~~ Delta Iron Works	~~320 Industrial Rd., Watsonville, CA~~ 15420-A Meridian Rd Proneda le, CA
Electrical	JM Electric	400 Griffin St., Salinas, CA
Sheet Metal	Cal Heating & Air, Inc.	140 5th Street, Hollister, CA
Plaster	Brady Company	13540 Blackie Rd., Castroville, CA

October 2006
06-0021

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 20 years. Experience in work of a nature similar to that covered in the bid extends over a period of 40 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.)

Signed: [signature]

Title: VICE PRESIDENT

Date: 1-27-2010

Acme / J.J. Reban

October 2006
06-0021

PUEBLO WATER RESOURCES

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 14 years. Experience in work of a nature similar to that covered in the bid extends over a period of 32 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.) N/A

Signed: Gene Jeffrey

Title: Owner

Date: 1-27-10

Jeffrey Concrete

October 2006
06-0021

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 21 years. Experience in work of a nature similar to that covered in the bid extends over a period of 21 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.)

Signed: _____

Title: Estimator / Project Manager

Date: 1/27/10

Sommerville

October 2006
06-0021

PUEBLO WATER RESOURCES

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 53 years. Experience in work of a nature similar to that covered in the bid extends over a period of 53 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.)

NONE

Signed: _____

Title: PRESIDENT

Date: 1/26/10

Andy's Roofing

[redacted]

October 2006
06-0021

PUEBLO water resources

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 14 years. Experience in work of a nature similar to that covered in the bid extends over a period of 14 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.) None

Signed: [signature]

Title: CFO

Date: 1/25/10

October 2006
06-0021

PUEBLO water resources

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 51 years. Experience in work of a nature similar to that covered in the bid extends over a period of 51 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.)

N/A

Signed: _____

Title: Estimator, project manager

Date: 1/26/10

Saleh Painting

October 2006
06-0021

PUEBLO water resources

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 11 years. Experience in work of a nature similar to that covered in the bid extends over a period of 11 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.)

Signed: _____

Title: Steve Stewart, President

Date: 1-27-10

Signature Glass

October 2006
06-0021

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 17 years. Experience in work of a nature similar to that covered in the bid extends over a period of 17 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.)

Signed: _____

Title: Estimator

Date: 1-27-10

Cornerstone Masonry

October 2006
06-0021

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 2 years. Experience in work of a nature similar to that covered in the bid extends over a period of 29 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.)

Signed: Tino Rodriguez

Title: Vice President

Date: 1/27/10

Cal Heating & Air

October 2006
06-0021

JM ELECTRIC

PUEBLO WATER RESOURCES

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 62 years. Experience in work of a nature similar to that covered in the bid extends over a period of 62 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.)

Signed:

Title: Project Mgr / Estimator

Date: 1-26-2010

J.M. Electric

Brady Company/Central California, Inc.

October 2006
06-0021

PUEBLO water resources

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 8 years. Experience in work of a nature similar to that covered in the bid extends over a period of 43 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.) N/A

Signed: _____
Gregg W. Brady
Title: President
Date: January 27, 2010

BRADY Plaster

13540 Blackie Rd
Castroville 95012

October 2008
06-0021

PUEBLO water resources

SUBCONTRACTOR'S EXPERIENCE AND QUALIFICATIONS

The subcontractor has been engaged in the contracting business, under the present business name for 15 years. Experience in work of a nature similar to that covered in the bid extends over a period of 30 years.

The subcontractor has never failed to satisfactorily complete a contract awarded to him, except as follows: (Use separate sheet as necessary.)

Signed: [signature]

Title: Owner / Partner

Date: January 27, 2010

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Purchase Order

5 Harris Court, Building G (shipping)
Monterey, CA 93940-5756
PO Box 85 (mailing)
Monterey, CA 93942-0085
(831) 658-5600 (P)
(831) 644-9560 (F)

Issued To: Electrical Distributors Co.
Attn: Randy Phares
310 Ramona Avenue
Monterey, CA 93940

	P. O. Number: 9787
	Date: 12/6/2010
	Account Number: 4-04-7860.04
	Ship via: truck to site
	Ship to attn: Joe Oliver
Terms Net-15	**Ship by date:** see Attachment 1

Quantity	Description	Unit Cost	Price
1	2000 Amp Meter & Main Switchboard - Phase 1 (Ref.: Proposal Q2CNo. 29091279, Quote No. 1) See materials description with attachments: 1. MPWMD Santa Margarita ASR Project, Main Switchboard Purchase Order Information 2. Section 16405 Service Main Switchboard 3. Drawing: E-3, one Line Diagram - Phase 1 Issued for Switchboard Purchase Technical Contact: Robert Kiyoi (805.681.0980) Kiyoi Engineering		54,500.00

Purchase order number must appear on all invoices and correspondence.
Please contact Joe Oliver (831.915.9031) prior to shipment.
Shipping destination: Santa Margarita ASR Facility Building
1910 General Jim Moore Boulevard, Seaside, CA

Subtotal	$ 54,500.00
Tax rate	
Sales tax	
Other (Shipping)	
Total	$ 54,500.00

12/6/10
Chief Financial Officer — Date

FOR ACCOUNTING USE ONLY	
Date Paid	
Amount Paid	
Check No.	
Asset	Yes No

u/mpwmd/excel/POs/template_genral.xls

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Purchase Order

5 Harris Court, Building G (shipping)
Monterey, CA 93940-5756
PO Box 85 (mailing)
Monterey, CA 93942-0085
(831) 658-5600 (P)
(831) 644-9560 (F)

	P. O. Number: 9799
	Date: 12/13/2010
	Account Number: 4-04-7860.04
	Ship via: truck to site
	Ship to attn: Joe Oliver
Terms Net-15	**Ship by date:** see Attachment 1

Issued To: Buckles-Smith
Attn: David Dohm
1315 Dayton Street, Suite A
Salinas, CA 93901

Quantity	Description	Unit Cost	Price
1	Phase 1 Motor Control Center (MCC), 480V 600A, 3-phase 3-wire 42KAIC per attached materials (Ref.: Buckles-Smith Proposal Sheet Revised 10/19/2010) See materials description with Attachments: 1. MPWMD Santa Margarita ASR Project, Motor Control Center Purchase Order Information 2. Section 16920 Motor Control Centers 3. Drawing: E-3B, One Line Diagram - Phase 1 Issued for MCC Purchase Technical Contact: Robert Kiyoi (805.681.0980) Kiyoi Engineering, Inc.		7,300.00

Purchase order number must appear on all invoices and correspondence.

Please use PO Box 85 for mailing correspondence and 5 Harris Court Bldg. G for shipping.

Confirming Order for Internal Processing
Do Not Duplicate

Subtotal	$ 7,300.00
Tax rate	
Sales tax	
Other (Shipping)	$0.00
Total	$ 7,300.00

Chief Financial Officer — Date 12/14/10

FOR ACCOUNTING USE ONLY	
Date Paid	
Amount Paid	
Check No.	
Asset	Yes No

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Purchase Order

PO Box 85 (mailing)
Monterey, CA 93942-0085
(831) 658-5600 (P)
(831) 644-9560 (F)

P. O. Number:
9797
Date: 12/9/2010
Account Number: 4-04-7860.04
Ship via: truck to site
Ship to attn: Joe Oliver
Ship by date: see Attachment 1

Issued To:

Buckles-Smith
Attn: David Dohm
1315 Dayton Street, Suite A
Salinas, CA 93901

Terms
Net-15

Quantity	Description	Unit Cost	Price
1	600HP, 480Vac, 3-Phase, 18 Pulse Variable Frequency Drive (Ref.: Buckles-Smith Proposal Sheet - Dated 10/22/2010) See materials description with Attachments: 1. MPWMD Santa Margarita ASR Project, Adjustable Frequency Drive Purchase Order Information 2. Section 16450 Adjustable Frequency Drives 3. Drawing: E-3B, One Line Diagram - Phase I Issued for VFD Purchase Technical Contact: Robert Kiyoi (805.681.0980) Kiyoi Engineering, Inc.		100,465.00

Purchase order no. must appear on all invoices and correspondence.

Please contact Joe Oliver (831.915.9031) prior to shipment.
Shipping destination: Santa Margarita ASR Facility Building
1910 General Jim Moore Boulevard, Seaside, CA

Subtotal	$ 100,465.00
Tax rate	NA
Sales tax	NA
Other (Shipping)	NA
Total	$ 100,465.00

Chief Financial Officer — Date 12/10/10

FOR ACCOUNTING USE ONLY	
Date Paid	
Amount Paid	
Check No.	
Asset	Yes No

Joe Oliver

From: rlkiyoi@kiyoieng.com
Sent: Thursday, December 23, 2010 10:34 AM
To: Joe Oliver
Cc: Steve Tanner
Subject: Re: VFD shielded power cables

Joe

I am on holiday the rest of this week but will be available for a call around 11:00

I sent out an email recommending the VFD cable a few weeks ago. The cost for the cable is about $56K. The existing conduits can be used. I have not had a chance to review the paper Steve sent but it probably reviews the same issues as the other references I havr read.

Please call my cell at 805 689 9253 if you want to discuss further.

Bob Kiyoi

On Dec 23, 2010, at 8:23 AM, "Joe Oliver" <Joe@mpwmd.dst.ca.us> wrote:

> Steve and Bob,
> We should discuss the ramifications of this shielded power cable issue as soon as you have time. I am available this morning to discuss.
> Thanks,
> --Joe

From: Steve Tanner [mailto:Stanner@pueblo-water.com]
Sent: Wednesday, December 22, 2010 7:21 PM
To: Joe Oliver
Cc: rlkiyoi@kiyoieng.com
Subject: FW: VFD shielded power cables

Hi Stephen

please forward a copy to Joe, I don't have his email. thanks.

It appears that there is more than EMI interference with long VFD power cables: With the two feet conduit separation between power and controls/instrumentation wiring there should not be any EMI interference between the power cables and the signal/control wiring. However, there is another phenomena that we need to be concern with "Standing Wave" pulse generation, see the attached document, in particular pages 3,4 and 5. This phenomena is more prevalent on application with long power cables between the VFD and the Motor. For the Santa Margarita project, the used of shielded power cables might not be optional: " long power supply cable will have greater and
more intense voltage spikes than a shorter cable"

Phase 2 Aquifer Storage and Recovery Project

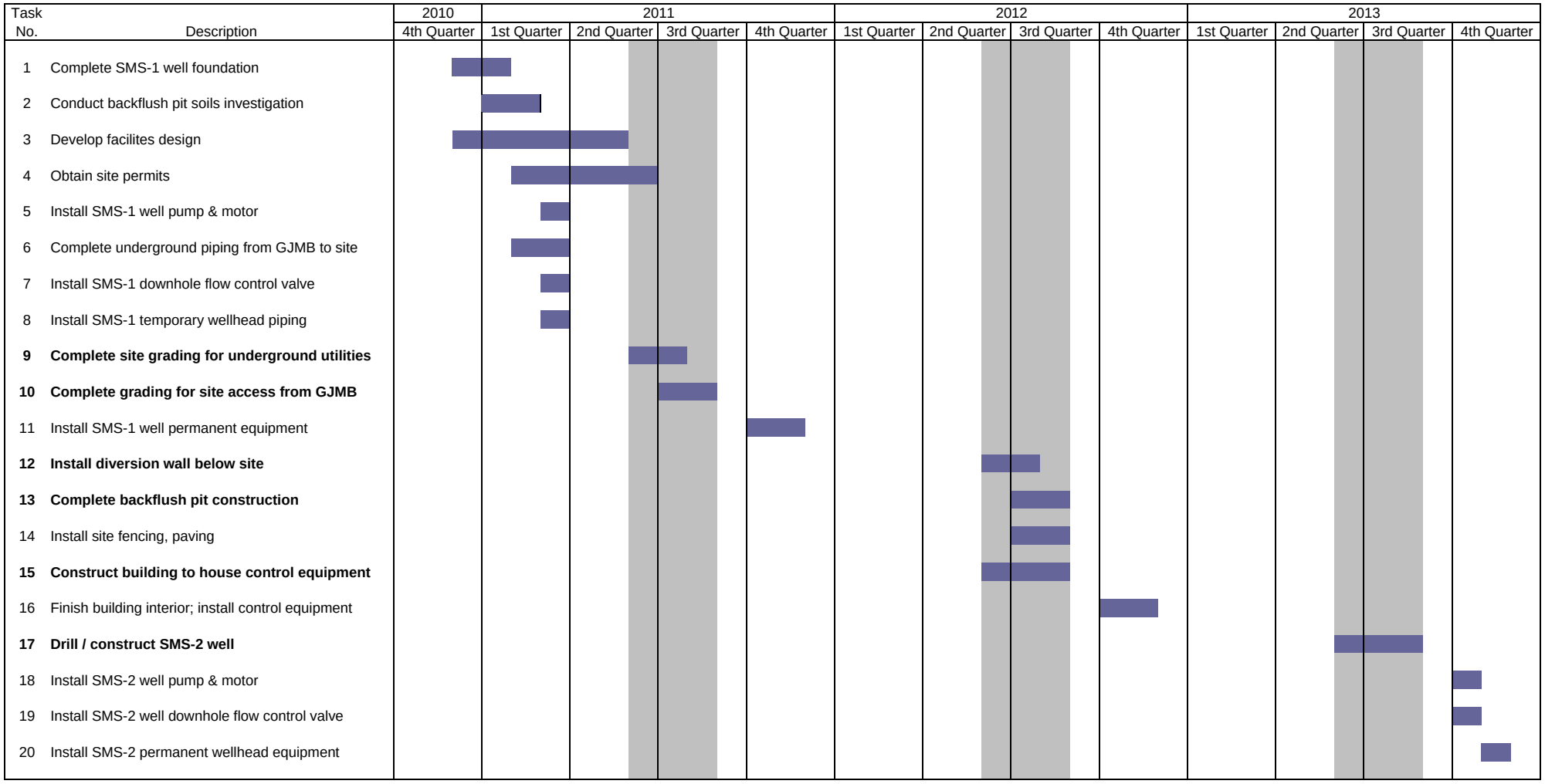
Seaside Middle School Site

Summary of Estimated Budget for Facility Construction

Facility Description	Engineering	Permitting	Construction Management	Construction	Sum
SMS-1 Well drilling, installation	--	--		1115000	$1,115,000
SMS-1 Pump & Motor	--	--	5000	160000	$165,000
SMS-1 Downhole Flow Control Valve	--	--	1300	90000	$91,300
SMS-1 Temporary Piping	--	--		21000	$21,000
Site Grading, Fencing, Paving	--	--	3000	75000	$78,000
SMS-1 Permanent Equipment	--	--		$76,000	$76,000
Diversion Wall	--	--			NA
Backflush pit	--	--	$20,000	$100,000	$120,000
Control equipment building	--	--	$17,500	$130,000	$147,500
Electrical control equipment	--	--	$20,000	$220,000	$240,000
SMS-2 Well drilling, installation	--	--		$1,336,000	$1,336,000
SMS-2 Pump & Motor	--	--	$6,000	$176,000	$182,000
SMS-2 Downhole Flow Control Valve	--	--	$1,400	$99,000	$100,400
SMS-2 Permanent equipment	--	--		$83,600	$83,600
Permanent piping & instrumentation	--	--	$5,000	$200,000	$205,000
Subtotal	$0	$0	$69,900	$2,420,600	$3,960,800
20% Contingency					$792,160
Total budget estimate					**$4,752,960**

Notes:
1. SMS = Seaside Middle School.
2. MPUSD easement approval process is currently underway for Phase 2 site.
3. As of December 2010, SMS-1 well has been drilled and constructed; no other facilities are in place on site (other than dedicated monitor well installation completed in Oct 2009).
4. Diversion Wall not yet designed; cost estimate Not Available (NA).
5. Estimates shown above do not include costs for Engineering, Permitting and some Construction Management, as these estimates are included in other budget worksheets for Professional Services with consultants.

SEASIDE MIDDLE SCHOOL
PHASE 2 AQUIFER STORAGE AND RECOVERY SITE
PROPOSED SCHEDULE FOR SITE DEVELOPMENT



NOTES:
1. Tasks shown above are proposed and will be refined as necessary.
2. 1st Quarter = Jan/Feb/Mar; 2nd Quarter = Apr/May/Jun; 3rd Quarter = Jul/Aug/Sep; 4th Quarter = Oct/Nov/Dec.
3. Construction activities with greater potential for noise generation are shown in **bold type**.
4. The potential noise-generating activities are timed to coincide with periods when Seaside Middle School (SMS) is not in session. These periods are the months of Jun, Jul, and early Aug, and are shown as **gray shading**.
5. Schedule is updated as of **December 31, 2010**.
6. The schedule shown above assumes that site easement negotiations that are currently in progress are completed in early 2011.